

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	299	12.3/12.9	95	149

REGISTERED CIVIL ENGINEER	DATE
<i>K. Selenthiran</i>	1-6-14
PLANS APPROVAL DATE	
03-26-14	

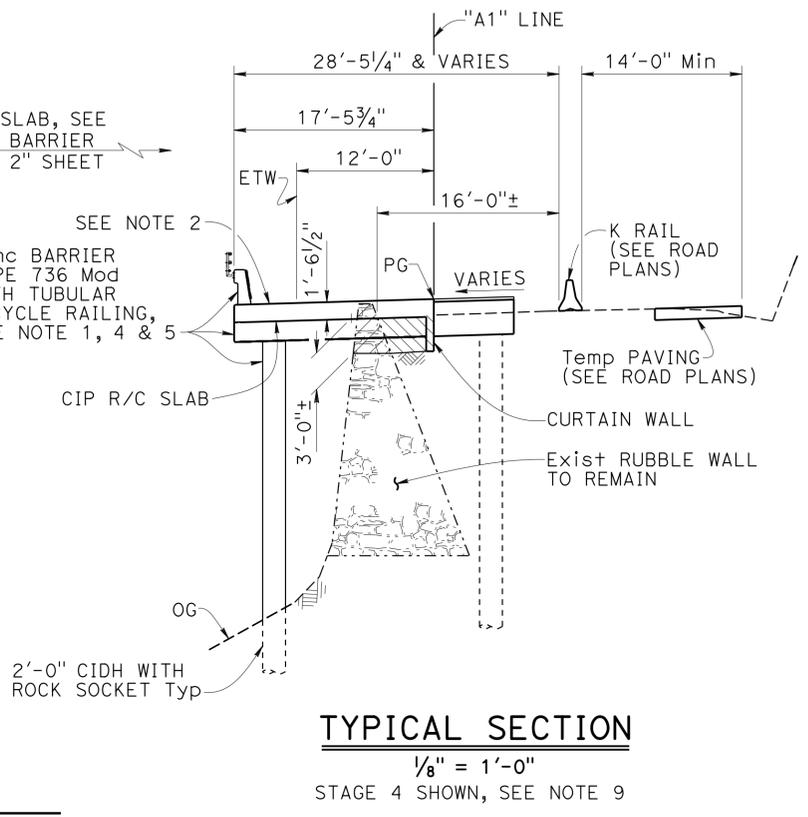
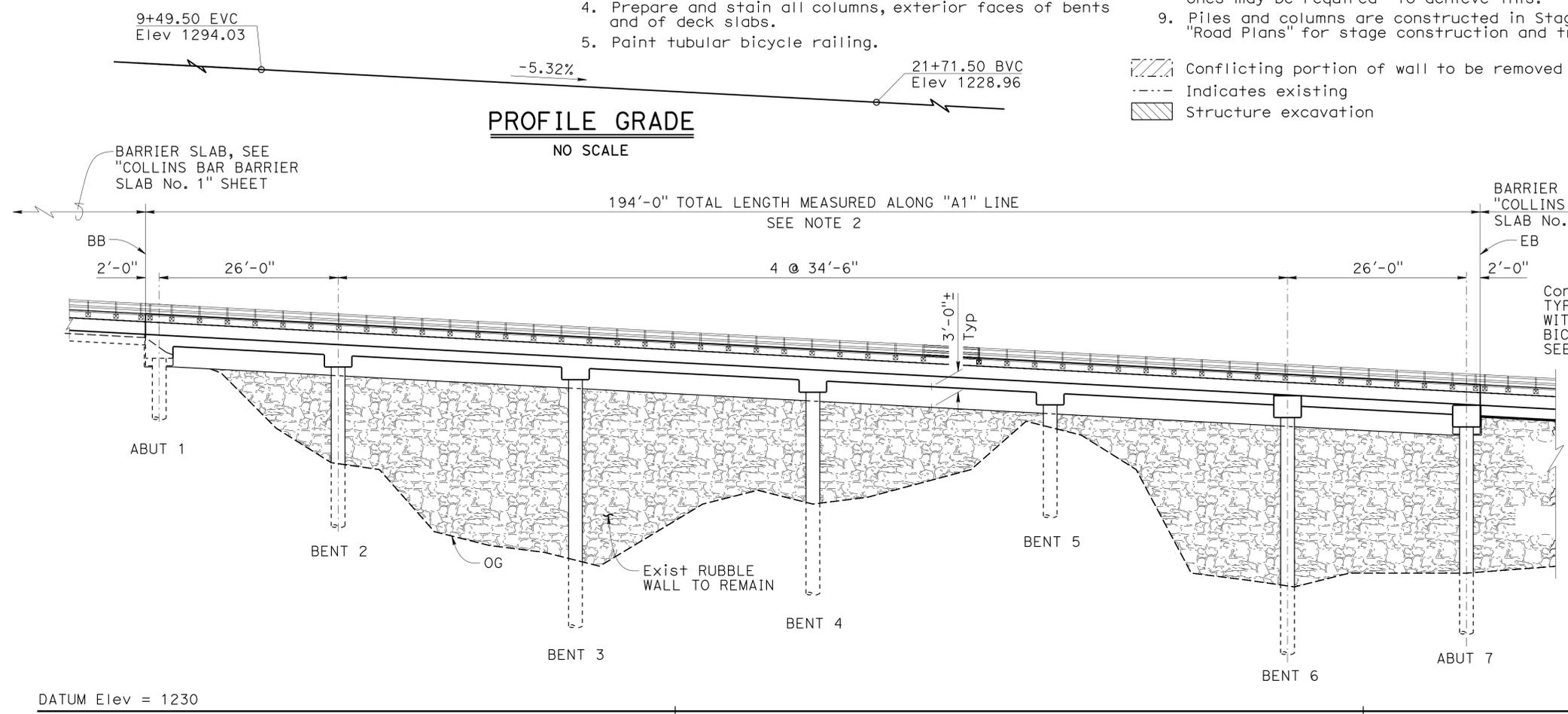
REGISTERED PROFESSIONAL ENGINEER
K. SELVENTHIRAN
No. C67973
Exp. 06-30-15
CIVIL
STATE OF CALIFORNIA

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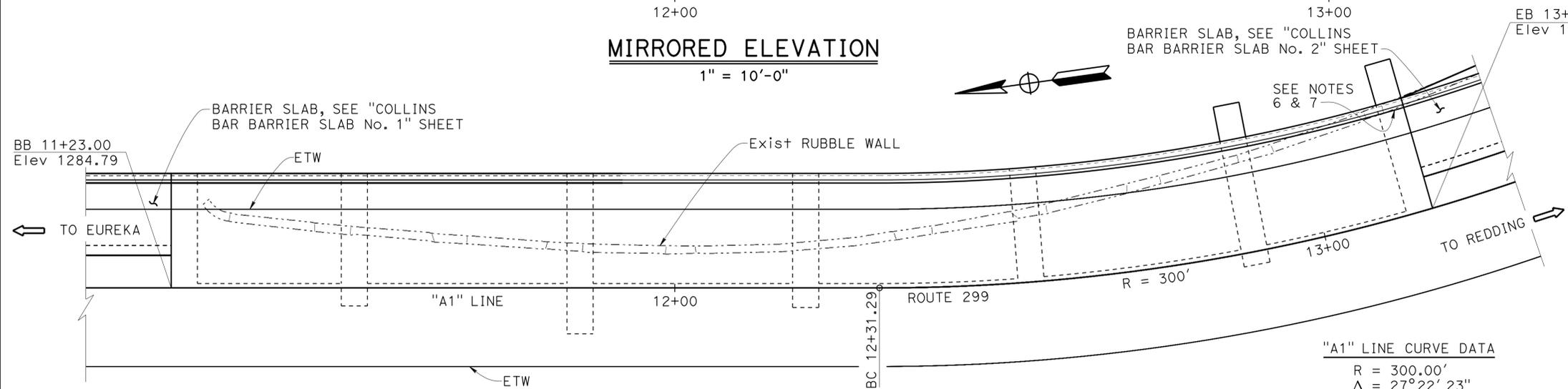
**NOTES:**

1. Inside face of concrete barrier to receive concrete surface texture.
2. Prepare concrete bridge deck surface and place 1" polyester concrete overlay.
3. For "INDEX TO PLANS", "STANDARD PLANS", "PILE DATA TABLE" AND "GENERAL NOTES", see "INDEX TO PLANS" sheet.
4. Prepare and stain all columns, exterior faces of bents and of deck slabs.
5. Paint tubular bicycle railing.
6. Paint bridge name "COLLINS BAR SIDEHILL VIADUCT No. 1".
7. Paint bridge no. "05-0091".
8. Existing rubble barrier and wall to be removed to an elevation 3' below bottom of new deck slab. The top of remaining wall to be leveled with a smooth mortar pad not to exceed 4" in thickness. Removal of large rocks and replacement with smaller ones may be required to achieve this.
9. Piles and columns are constructed in Stage 2 and Stage 3, see "Road Plans" for stage construction and traffic openings.

- Conflicting portion of wall to be removed
- Indicates existing
- Structure excavation



**MIRRORED ELEVATION**



**PLAN**

1" = 10'-0"

**"A1" LINE CURVE DATA**

R = 300.00'  
 $\Delta = 27^\circ 22' 23''$   
 T = 73.06'  
 L = 143.32'

**QUANTITIES**

DESCRIPTION	QUANTITY	UNIT	SUM
RECONSTRUCT RUBBLE WALL			LUMP SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	3,104	SQFT	
FURNISH POLYESTER CONCRETE OVERLAY	324	CF	
PLACE POLYESTER CONCRETE OVERLAY	3,104	SQFT	
STRUCTURE EXCAVATION (BRIDGE)	240	CY	
STRUCTURE BACKFILL (BRIDGE)	38	CY	
24" CAST-IN-DRILLED-HOLE CONCRETE PILING (ROCK SOCKET)	75	LF	
24" CAST-IN-DRILLED-HOLE CONCRETE PILING (ROCK SOCKET)	295	LF	
STRUCTURAL CONCRETE, BRIDGE	266	CY	
JOINT SEAL (MR 1")	35	LF	
BAR REINFORCING STEEL (BRIDGE)	50,709	LB	
BAR REINFORCING STEEL (EPOXY COATED)(BRIDGE)	22,240	LB	
PREPARE AND STAIN CONCRETE	1,584	SQFT	
MISCELLANEOUS METAL (BRIDGE)	1,503	LB	
TUBULAR BICYCLE RAILING	194	LF	
CONCRETE BARRIER (TYPE 736 MODIFIED)	194	LF	

G. Setberg DESIGN ENGINEER	DESIGN	BY G. SLOCUM	CHECKED K. SELVENTHIRAN	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 2	BRIDGE NO.	05-0091	COLLINS BAR SIDEHILL VIADUCT No. 1 GENERAL PLAN	
	DETAILS	BY C. FIGUERRES	CHECKED K. SELVENTHIRAN	LAYOUT	BY G. SLOCUM			CHECKED K. SELVENTHIRAN	POST MILE		12.53
	QUANTITIES	BY G. SLOCUM	CHECKED K. SELVENTHIRAN	SPECIFICATIONS	BY D. Klein			PLANS AND SPECS COMPARED	D. Klein		

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0	1	2	3
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UNIT: 3577	PROJECT NUMBER & PHASE: 0200020151	CONTRACT NO.: 02-3E7904	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 1 OF 26
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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	299	12.3/12.9	96	149
			1-6-14	DATE	
REGISTERED CIVIL ENGINEER			DATE		
03-26-14			PLANS APPROVAL DATE		
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## GENERAL NOTES (LOAD AND RESISTANCE FACTOR DESIGN)

DESIGN: AASHTO LRFD Bridge Design Specifications, Fourth Edition and the California Amendments preface dated September 2010.

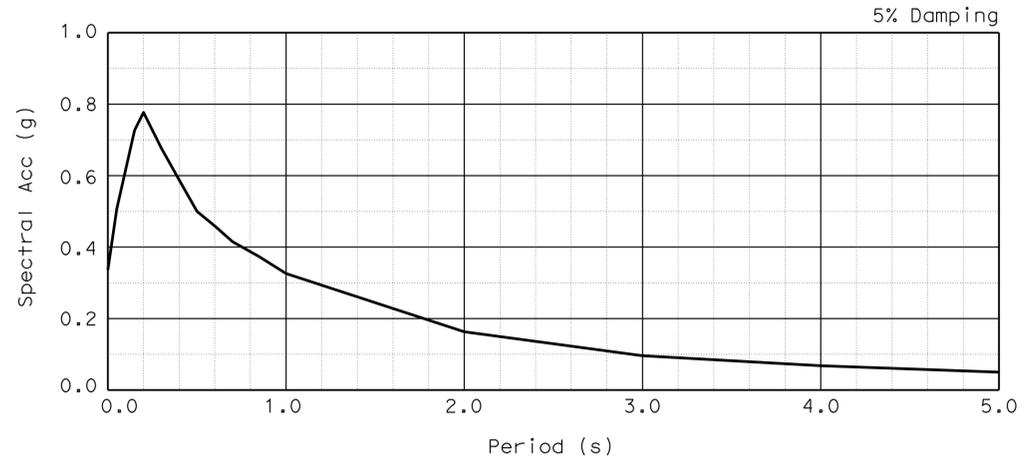
SEISMIC DESIGN: Caltrans Seismic Design Criteria (SDC) Version 1.6, November 2010.

DEAD LOAD: Includes 35 psf for wearing surface.

LIVE LOADING: HL-93 and P-15 Permit Design Load.

SEISMIC LOADING: FAULT: BIG LAGOON-BALD MOUNTAIN I.D.: 9  
SOIL PROFILE: Vs30 = 760 m/s  
MOMENT OF MAGNITUDE: Mmax = 7.5  
PEAK GROUND ACCELERATION: 0.34g

REINFORCED CONCRETE: fy = 60 ksi  
fc = 4.0 ksi  
n = 8



ACCELERATION RESPONSE SPECTRUM

### INDEX TO PLANS

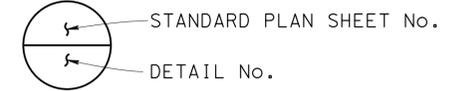
1. GENERAL PLAN
2. INDEX TO PLANS
3. DECK CONTOURS
4. FOUNDATION PLAN
5. ABUTMENT 1 DETAILS
6. ABUTMENT 7 DETAILS
7. BENT 2 DETAILS
8. BENT 3 DETAILS
9. BENT 4 DETAILS
10. BENT 5 DETAILS
11. BENT 6 DETAILS
12. TYPICAL SECTION
13. TOP DECK REINFORCEMENT
14. BOTTOM DECK REINFORCEMENT
15. PIPE PIN DETAILS
16. ARCHITECTURAL TREATMENT
17. TUBULAR BICYCLE RAILING DETAILS
18. LOG OF TEST BORINGS 1 OF 9
19. LOG OF TEST BORINGS 2 OF 9
20. LOG OF TEST BORINGS 3 OF 9
21. LOG OF TEST BORINGS 4 OF 9
22. LOG OF TEST BORINGS 5 OF 9
23. LOG OF TEST BORINGS 6 OF 9
24. LOG OF TEST BORINGS 7 OF 9
25. LOG OF TEST BORINGS 8 OF 9
26. LOG OF TEST BORINGS 9 OF 9

### PILE DATA TABLE

SUPPORT LOCATION	PILE TYPE	NOMINAL RESISTANCE		CUT-OFF ELEVATION	ESTIMATED TOP OF BEDROCK ELEVATION	PILE		
		COMPRESSION	TENSION			DESIGN TIP ELEVATION	SPECIFIED TIP ELEVATION	
		kips				ft		
Abut 1	LEFT	2'-0" ∅ CIDH Conc PILING WITH 2'-0" ∅ ROCK SOCKET	250	0	1281.6	1282.0	1265.0 (a), 1264.0 (b)	1264.0 (b)
	RIGHT	2'-0" ∅ CIDH Conc PILING WITH 2'-0" ∅ ROCK SOCKET	250	0	1281.4	1281.0	1270.0 (a), 1266.6 (b)	1266.6 (b)
BENT 2	LEFT	2'-0" ∅ CIDH Conc PILING WITH 2'-0" ∅ ROCK SOCKET	530	0	1267.3	1265.0	1241.0 (a), 1246.7 (b)	1241.0 (a)
	RIGHT	2'-0" ∅ CIDH Conc PILING WITH 2'-0" ∅ ROCK SOCKET	380	0	1280.0	1270.0	1250.0 (a), 1259.4 (b)	1250.0 (a)
BENT 3	LEFT	2'-0" ∅ CIDH Conc PILING WITH 2'-0" ∅ ROCK SOCKET	580	0	1253.8	1251.0	1223.0 (a), 1236.5 (b)	1223.0 (a)
	RIGHT	2'-0" ∅ CIDH Conc PILING WITH 2'-0" ∅ ROCK SOCKET	360	0	1278.4	1256.0	1244.0 (a), 1257.2 (b)	1244.0 (a)
BENT 4	LEFT	2'-0" ∅ CIDH Conc PILING WITH 2'-0" ∅ ROCK SOCKET	550	0	1258.3	1256.0	1226.0 (a), 1241.0 (b)	1226.0 (a)
	RIGHT	2'-0" ∅ CIDH Conc PILING WITH 2'-0" ∅ ROCK SOCKET	390	0	1275.5	1269.0	1254.0 (a), 1255.0 (b)	1254.0 (a)
BENT 5	LEFT	2'-0" ∅ CIDH Conc PILING WITH 2'-0" ∅ ROCK SOCKET	530	0	1272.4	1272.0	1235.0 (a), 1255.0 (b)	1235.0 (a)
	RIGHT	2'-0" ∅ CIDH Conc PILING WITH 2'-0" ∅ ROCK SOCKET	430	0	1274.4	1273.0	1254.0 (a), 1252.9 (b)	1252.9 (b)
BENT 6	LEFT	2'-0" ∅ CIDH Conc PILING WITH 2'-0" ∅ ROCK SOCKET	440	0	1246.7	1246.0	1224.0 (a), 1230.1 (b)	1224.0 (a)
	RIGHT	2'-0" ∅ CIDH Conc PILING WITH 2'-0" ∅ ROCK SOCKET	430	0	1272.7	1260.0	1240.0 (a), 1250.7 (b)	1240.0 (a)
Abut 7	LEFT	2'-0" ∅ CIDH Conc PILING WITH 2'-0" ∅ ROCK SOCKET	236	0	1250.8	1250.0	1230.0 (a), 1233.4 (b)	1230.0 (a)
	RIGHT	2'-0" ∅ CIDH Conc PILING WITH 2'-0" ∅ ROCK SOCKET	280	0	1271.2	1259.0	1244.0 (a), 1249.4 (b)	1244.0 (a)

### STANDARD PLANS 2010

- RSP A10A ABBREVIATIONS (SHEET 1 OF 2)
- RSP A10B ABBREVIATIONS (SHEET 2 OF 2)
- A10C LINE AND SYMBOLS
- A10D LINE AND SYMBOLS
- A62C LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL - BRIDGE
- B0-1 BRIDGE DETAILS
- B0-3 BRIDGE DETAILS
- B0-13 BRIDGE DETAILS
- B6-21 JOINT SEALS (MAXIMUM MOVEMENT RATING = 2")
- RSP B11-56 CONCRETE BARRIER TYPE 736

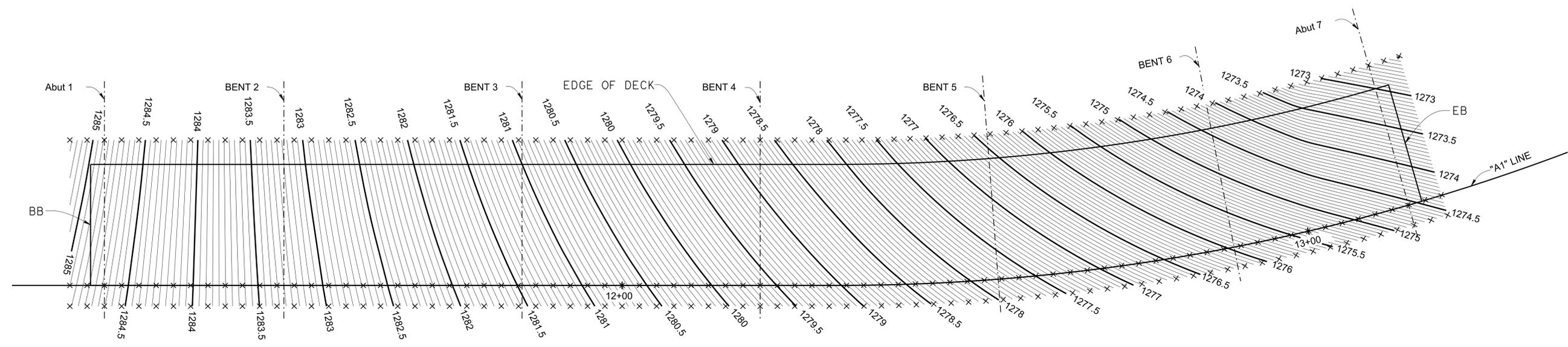


NOTES:  
1. DESIGN TIP ELEVATIONS ARE CONTROLLED BY: (a) COMPRESSION, AND (b) LATERAL LOADS, RESPECTIVELY.

DESIGN BY: G. SLOCUM CHECKED: K. SELVENTHIRAN DETAILS BY: C. FIGUERRES CHECKED: K. SELVENTHIRAN QUANTITIES BY: G. SLOCUM CHECKED: K. SELVENTHIRAN	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 2</b>	BRIDGE NO. 05-0091	<b>COLLINS BAR SIDEHILL VIADUCT No. 1</b> <b>INDEX TO PLANS</b>	
				POST MILE 12.53	SHEET 2 OF 26
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		UNIT: 3577 PROJECT NUMBER & PHASE: 0200020151 CONTRACT NO.: 02-3E7904	
		DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES: 4-08-13, 5-13-13, 8-27-13 USERNAME => s123119 DATE PLOTTED => 28-MAY-2014 TIME PLOTTED => 15:08	

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	299	12.3/12.9	97	149
REGISTERED CIVIL ENGINEER			DATE	1-6-14	
PLANS APPROVAL DATE			03-26-14		
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- NOTES:
1. Contours do not include camber
  2. Contours shown are top of deck elevation
  3. Contours interval = 0.05 Ft
- × 2.5 Ft Interval measured along station line



**DECK CONTOURS**  
1/8" = 1'-0"

DESIGN	BY G. SLOCUM	CHECKED K. SELVENTHIRAN
DETAILS	BY C. FIGUERRES	CHECKED K. SELVENTHIRAN
QUANTITIES	BY G. SLOCUM	CHECKED K. SELVENTHIRAN

**STATE OF CALIFORNIA**  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
**DESIGN BRANCH 2**

BRIDGE NO.	05-0091
POST MILE	12.53

**COLLINS BAR SIDEHILL VIADUCT No. 1**  
**DECK CONTOURS**

CURVE DATA				
No.	R	Δ	T	L
①	300.00	27°22'23"	73.06	143.32

LEGEND:  
○ CIDH

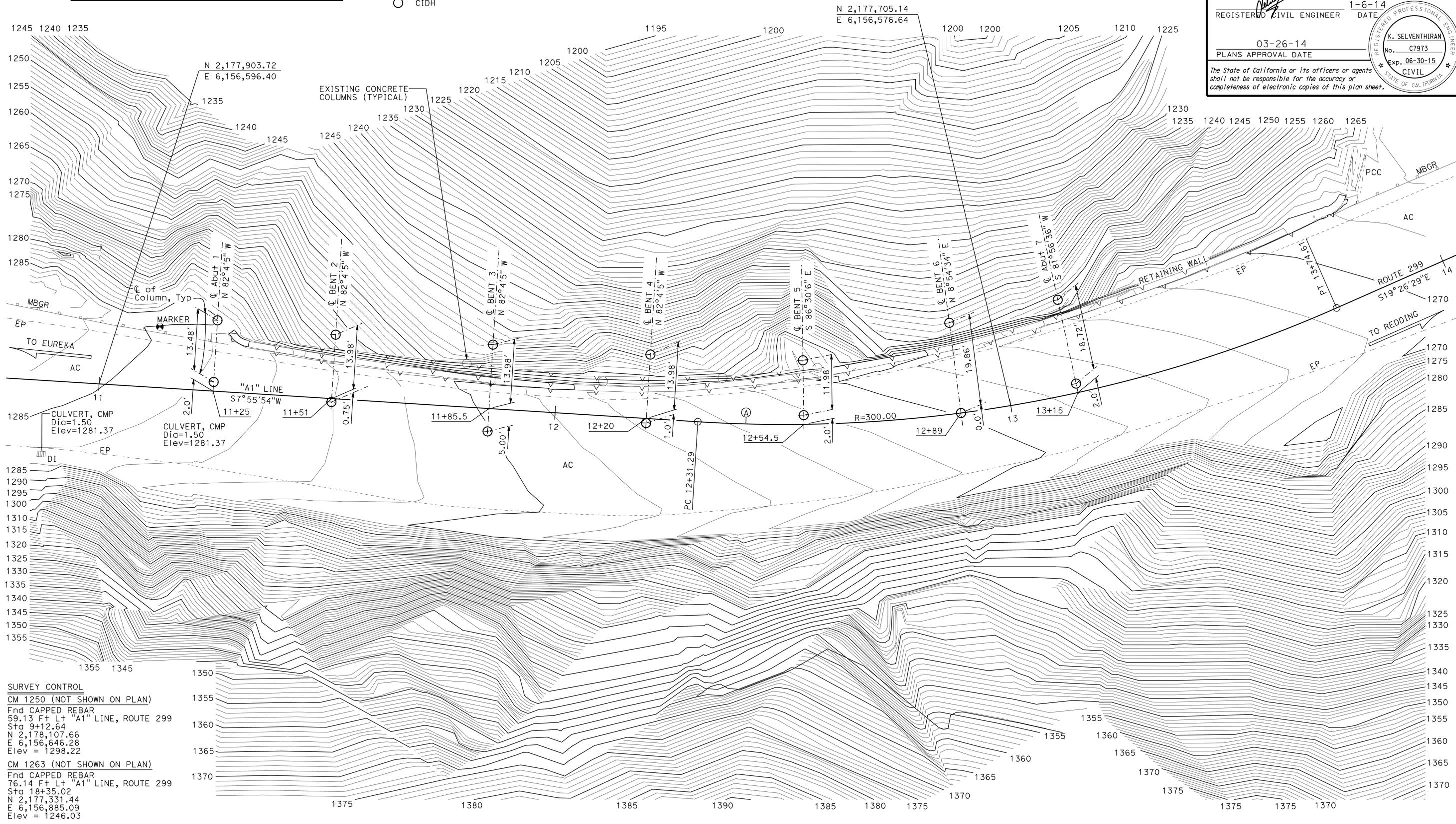
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	299	12.3/12.9	98	149

REGISTERED CIVIL ENGINEER DATE 1-6-14

PLANS APPROVAL DATE 03-26-14

REGISTERED PROFESSIONAL ENGINEER  
K. SELVENTHIRAN  
No. C7973  
Exp. 06-30-15  
CIVIL  
STATE OF CALIFORNIA

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SURVEY CONTROL  
CM 1250 (NOT SHOWN ON PLAN)  
Fnd CAPPED REBAR  
59.13 Ft Lt "A1" LINE, ROUTE 299  
Sta 9+12.64  
N 2,178,107.66  
E 6,156,646.28  
Elev = 1298.22

CM 1263 (NOT SHOWN ON PLAN)  
Fnd CAPPED REBAR  
76.14 Ft Lt "A1" LINE, ROUTE 299  
Sta 18+35.02  
N 2,177,331.44  
E 6,156,885.09  
Elev = 1246.03

PRELIMINARY INVESTIGATION SECTION				DESIGN BY G. SLOCUM	CHECKED K. SELVENTHIRAN	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 2	BRIDGE NO. 05-0091	COLLINS BAR SIDEHILL VIADUCT No. 1 FOUNDATION PLAN
SCALE 1"=10'	VERT. DATUM NAVD88	PHOTOGRAMMETRY AS OF: X	DETAILS BY C. FIGUERRES	CHECKED K. SELVENTHIRAN	POST MILE 12.53				
ALIGNMENT TIES Dist. Traverse Sheet	DRAFTED BY T. ZOLNIKOV	CHECKED BY T. SCHMALZ	QUANTITIES BY G. SLOCUM	CHECKED K. SELVENTHIRAN					

STRUCTURES FOUNDATION PLAN SHEET (ENGLISH) (REV. 09-01-10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

UNIT: 3577 PROJECT NUMBER & PHASE: 0200020151 CONTRACT NO.: 02-3E7904

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
08/27/12 12/08/12 1/28/13 5/13/13	4	26

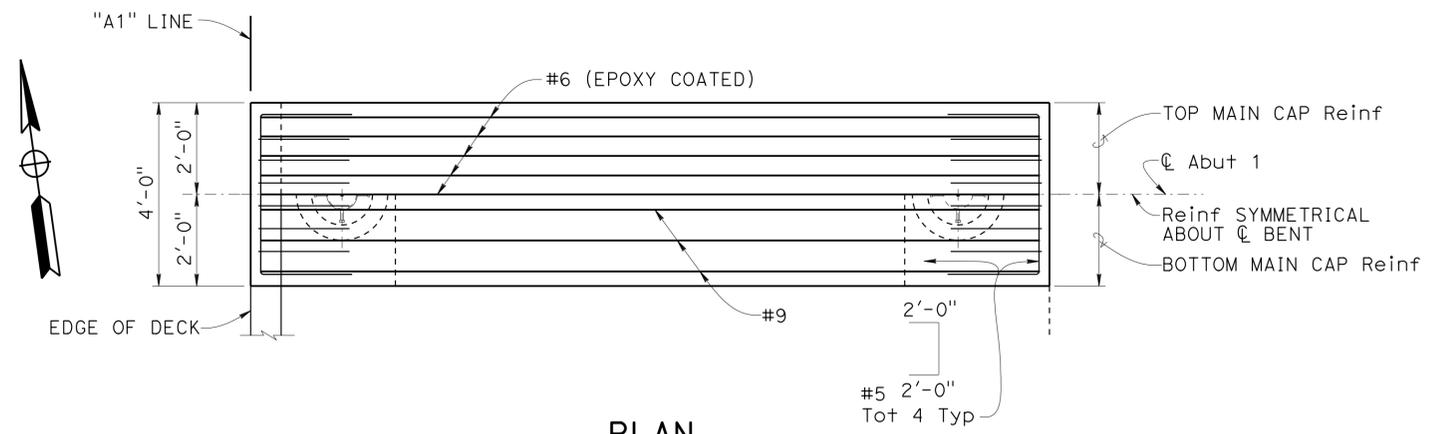
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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	299	12.3/12.9	99	149
REGISTERED CIVIL ENGINEER			DATE	1-6-14	
PLANS APPROVAL DATE			03-26-14		
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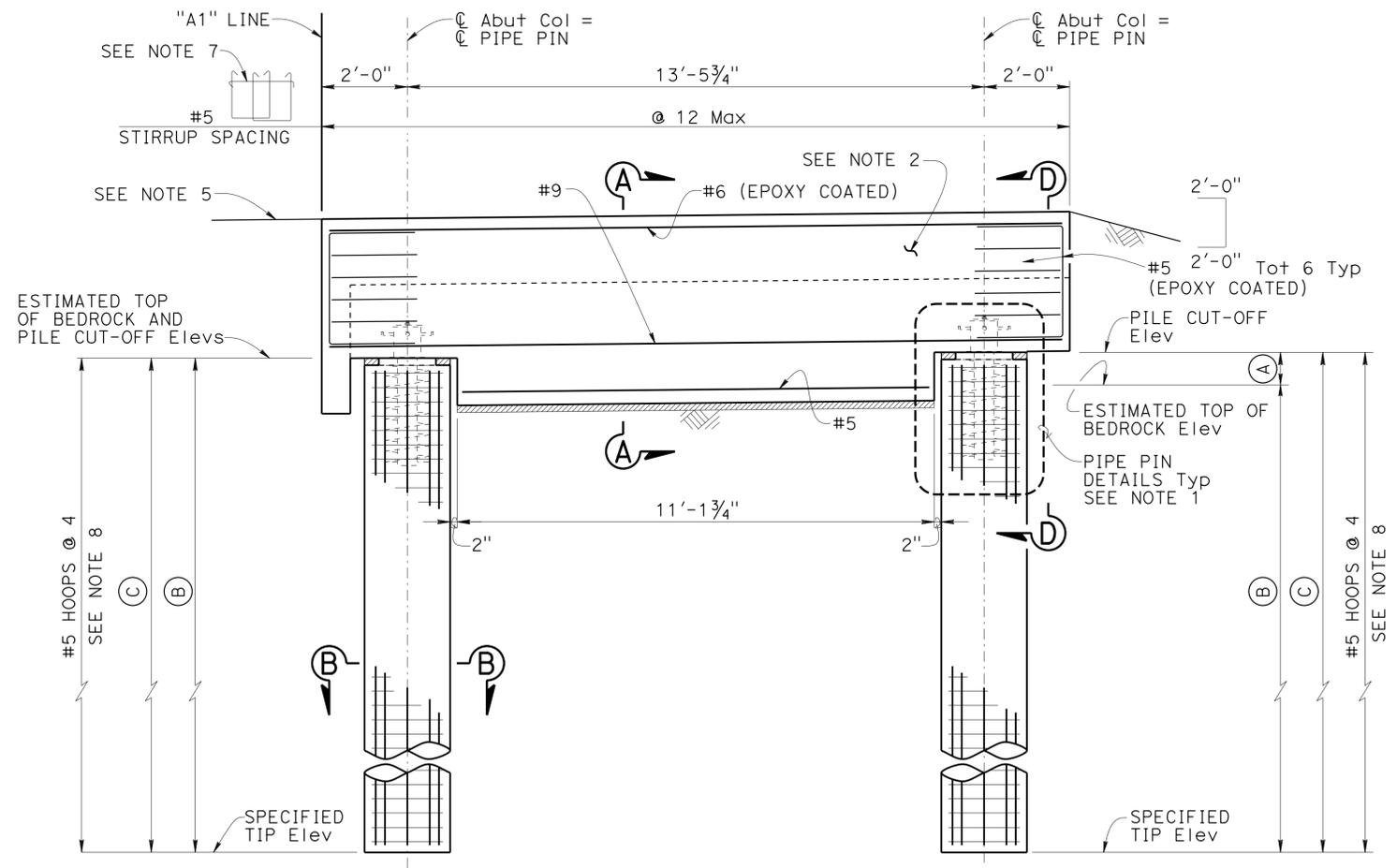


**NOTES:**

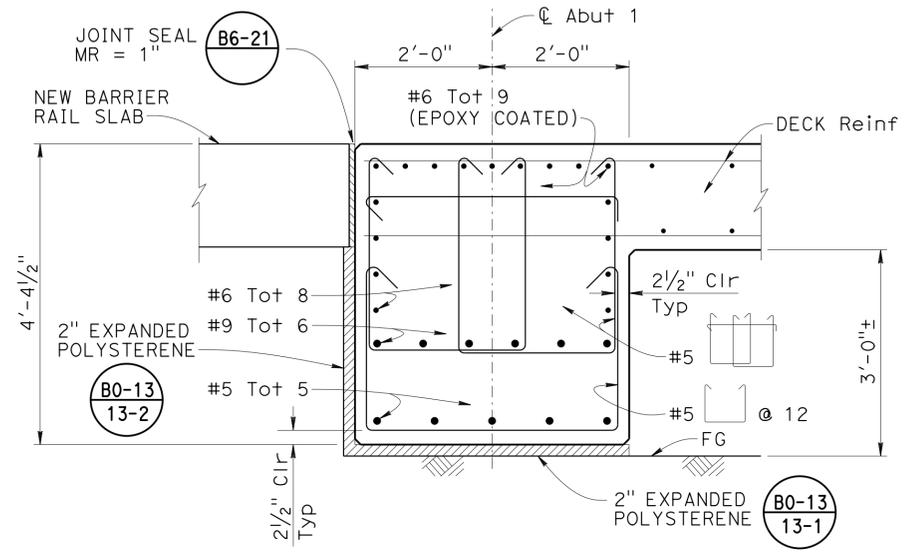
1. For "PIPE PIN DETAILS", See "PIPE PIN DETAILS" sheet.
  2. Deck slab reinforcement not shown for clarity.
  3. For pile cutoff elevation, estimated top of bedrock elevation and specified tip elevation, see "PILE DATA TABLE" on "INDEX TO PLANS" sheet.
  4. Splices not permitted in main cap bars.
  5. For new roadway, see "ROAD PLANS".
  6. For "SECTION D-D", see "ABUTMENT 7 DETAILS" sheet.
  7. Alternate 135° hooks for ties.
  8. All hoops shall be ultimate butt spliced continuous.
- (A) Limits of payment for 24" Ø CIDH concrete pile.  
 (B) Limits of payment for 24" Ø CIDH concrete pile (Rock Socket).  
 (C) No splices in main reinforcement.



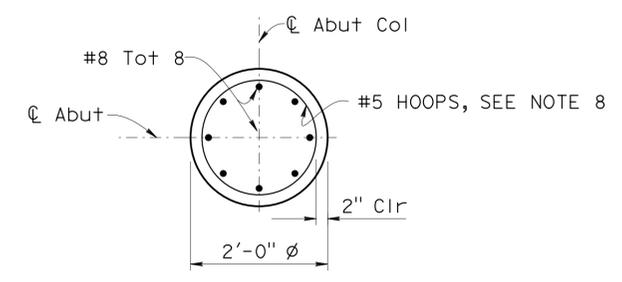
**PLAN**  
1/2" = 1'-0"



**ELEVATION**  
1/2" = 1'-0"



**SECTION A-A**  
3/4" = 1'-0"



**TYPICAL ABUTMENT COLUMN/CIDH PILE**

**SECTION B-B**  
3/4" = 1'-0"

DESIGN	BY G. SLOCUM	CHECKED K. SELVENTHIRAN
DETAILS	BY C. FIGUERRES	CHECKED K. SELVENTHIRAN
QUANTITIES	BY G. SLOCUM	CHECKED K. SELVENTHIRAN

**STATE OF CALIFORNIA**  
DEPARTMENT OF TRANSPORTATION

**DIVISION OF ENGINEERING SERVICES**  
STRUCTURE DESIGN  
**DESIGN BRANCH 2**

BRIDGE NO.	05-0091
POST MILE	12.53

**COLLINS BAR SIDEHILL VIADUCT No. 1**  
**ABUTMENT 1 DETAILS**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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REGISTERED CIVIL ENGINEER	DATE
03-26-14	1-6-14
PLANS APPROVAL DATE	

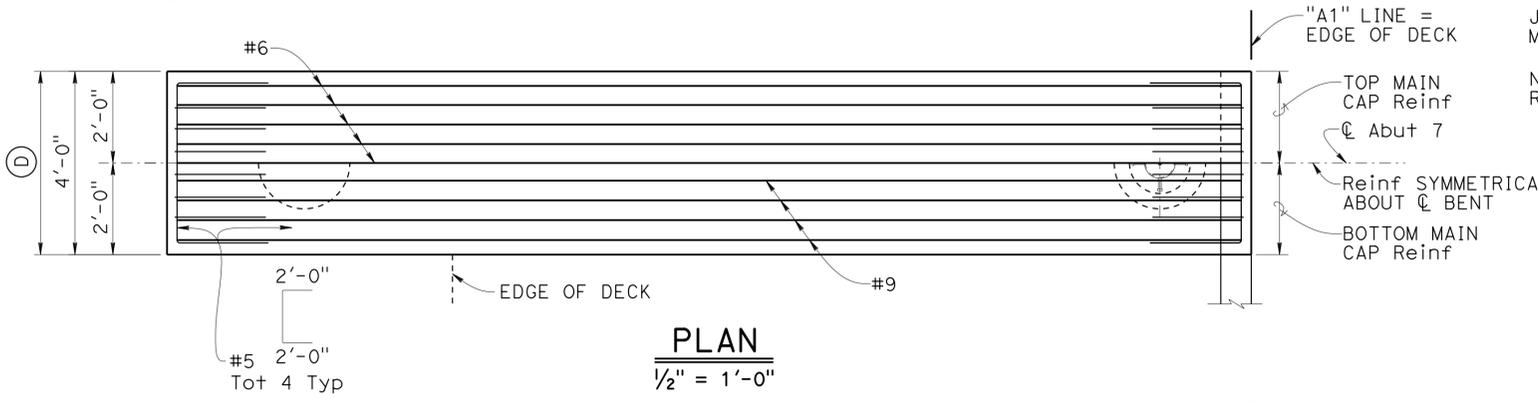
  

REGISTERED PROFESSIONAL ENGINEER
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CIVIL

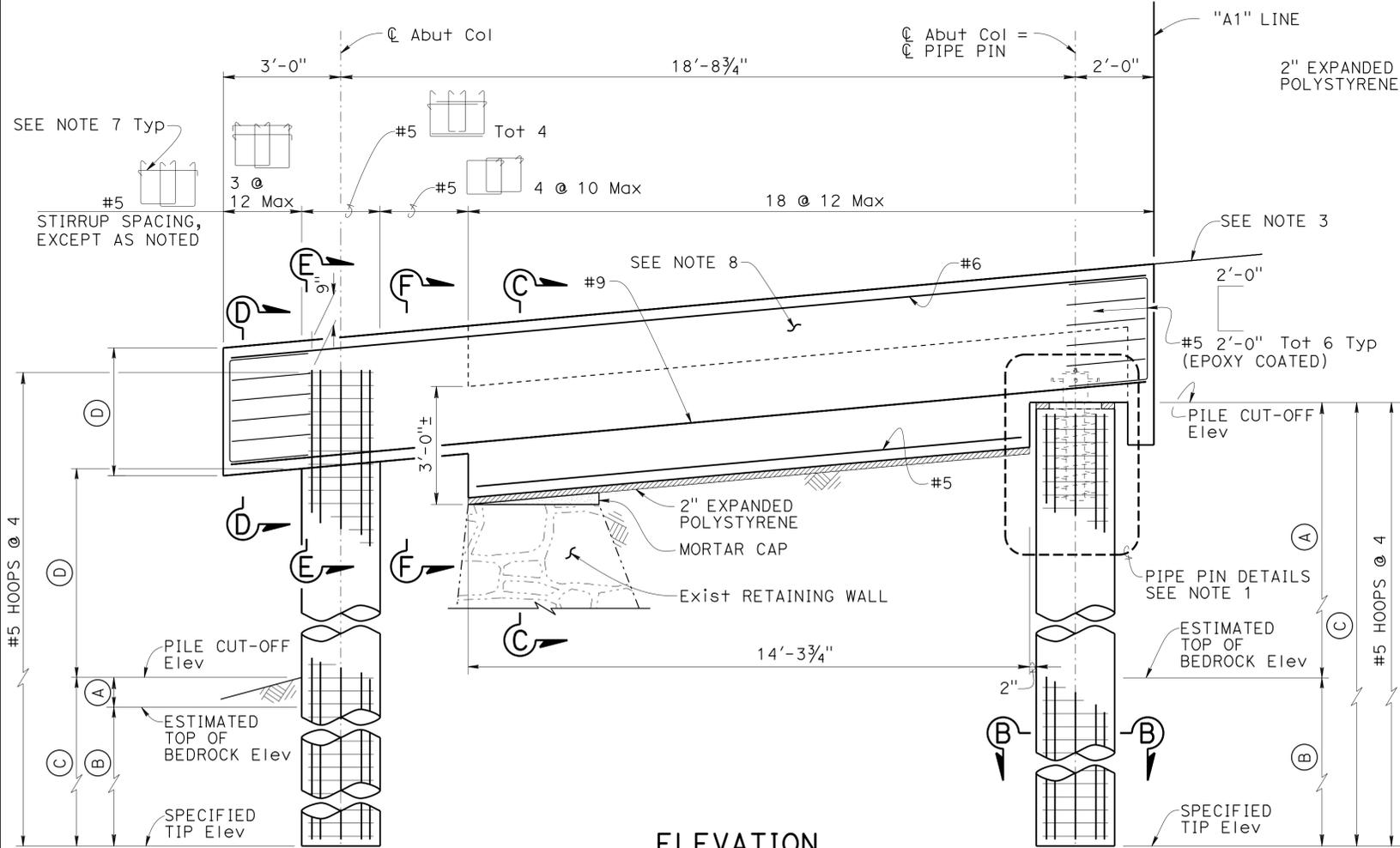
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**NOTES:**

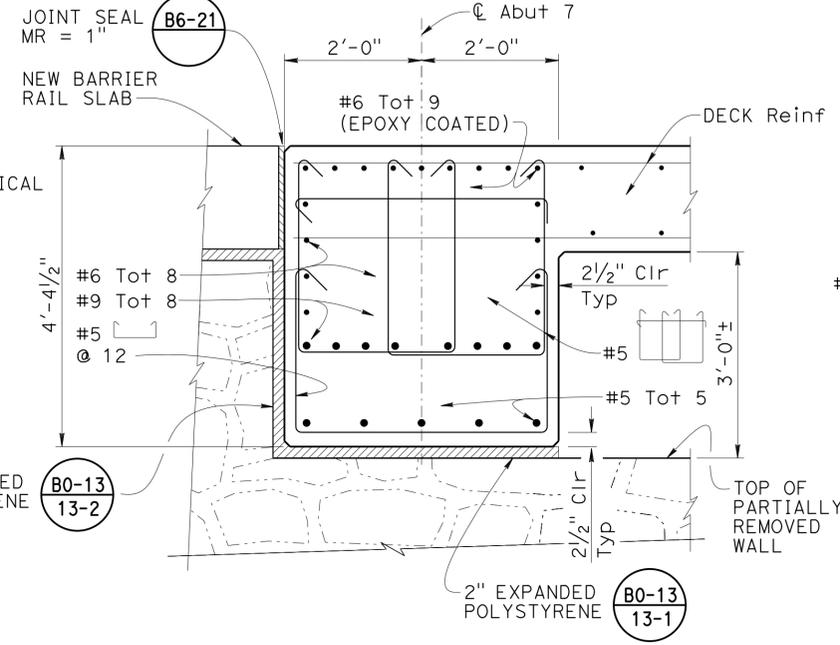
- For "PIPE PIN DETAILS", See "PIPE PIN DETAILS" sheet.
  - For "SECTION B-B", see "ABUTMENT 1 DETAILS" sheet.
  - For new roadway, see "ROAD PLANS".
  - Splices not permitted in main cap bars.
  - Splices in Main Column and Main Pile reinforcement shall ultimate butt type and must be staggered a minimum of 3'-0". Only one splice permitted per bar in each allowable splice zone.
  - For pile cutoff elevation, estimated top of bedrock elevation and specified tip elevation, see "PILE DATA TABLE" on "INDEX TO PLANS" sheet.
  - Alternate 135° hooks for ties.
  - Deck slab reinforcement not shown for clarity.
  - For details not shown or noted, see "SECTION C-C".
- (A) Limits of payment for 24" ø CIDH concrete pile.  
 (B) Limits of payment for 24" ø CIDH concrete pile (Rock Socket).  
 (C) No splices in main reinforcement.  
 (D) Limits of payment for prepare and stain concrete.



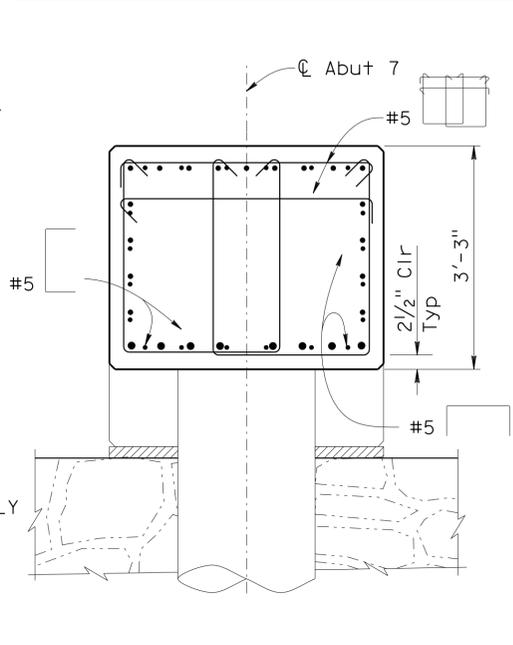
**PLAN**  
1/2" = 1'-0"



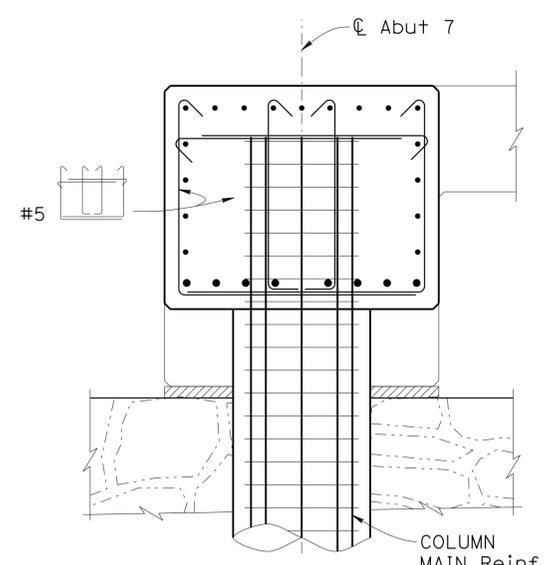
**ELEVATION**  
1/2" = 1'-0"



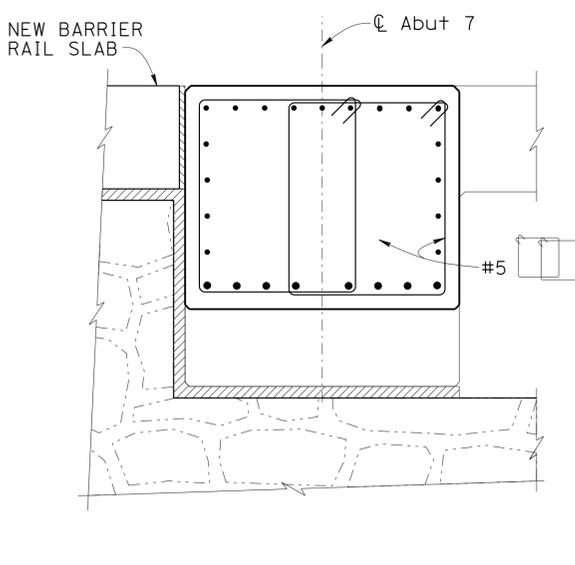
**SECTION C-C**  
3/4" = 1'-0"



**SECTION D-D**  
3/4" = 1'-0"  
SEE NOTE 9



**SECTION E-E**  
3/4" = 1'-0"



**SECTION F-F**  
3/4" = 1'-0"  
SEE NOTE 9

DESIGN	BY	G. SLOCUM	CHECKED	K. SELVENTHIRAN	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 2	BRIDGE NO.	05-0091	COLLINS BAR SIDEHILL VIADUCT No. 1 ABUTMENT 7 DETAILS	
	DETAILS	BY	C. FIGUERRES	CHECKED			K. SELVENTHIRAN	POST MILE		12.53
	QUANTITIES	BY	G. SLOCUM	CHECKED			K. SELVENTHIRAN			

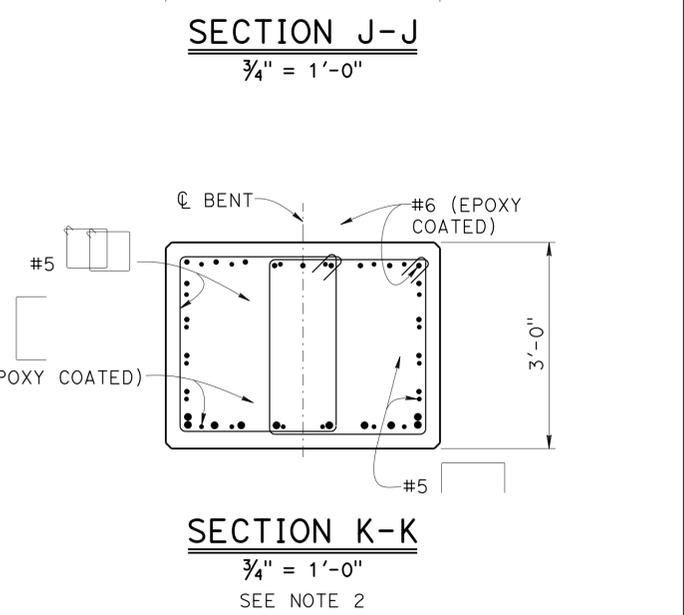
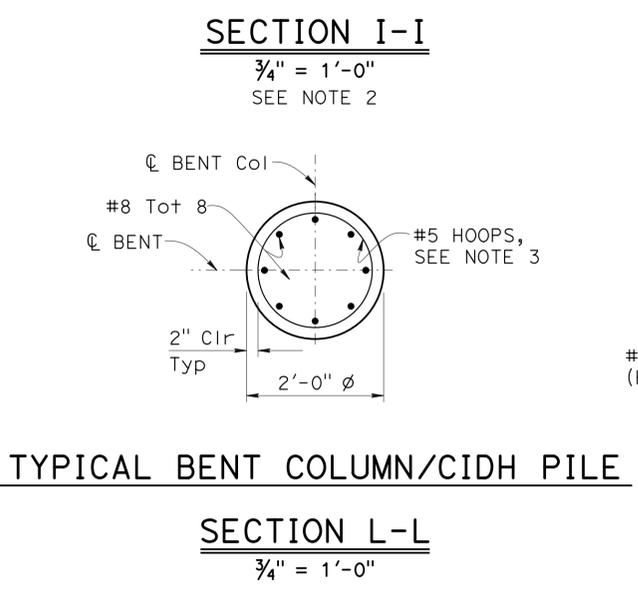
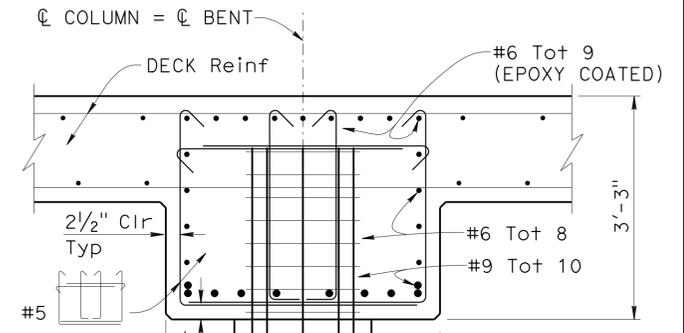
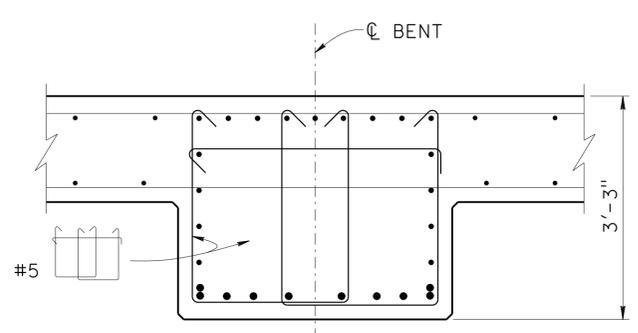
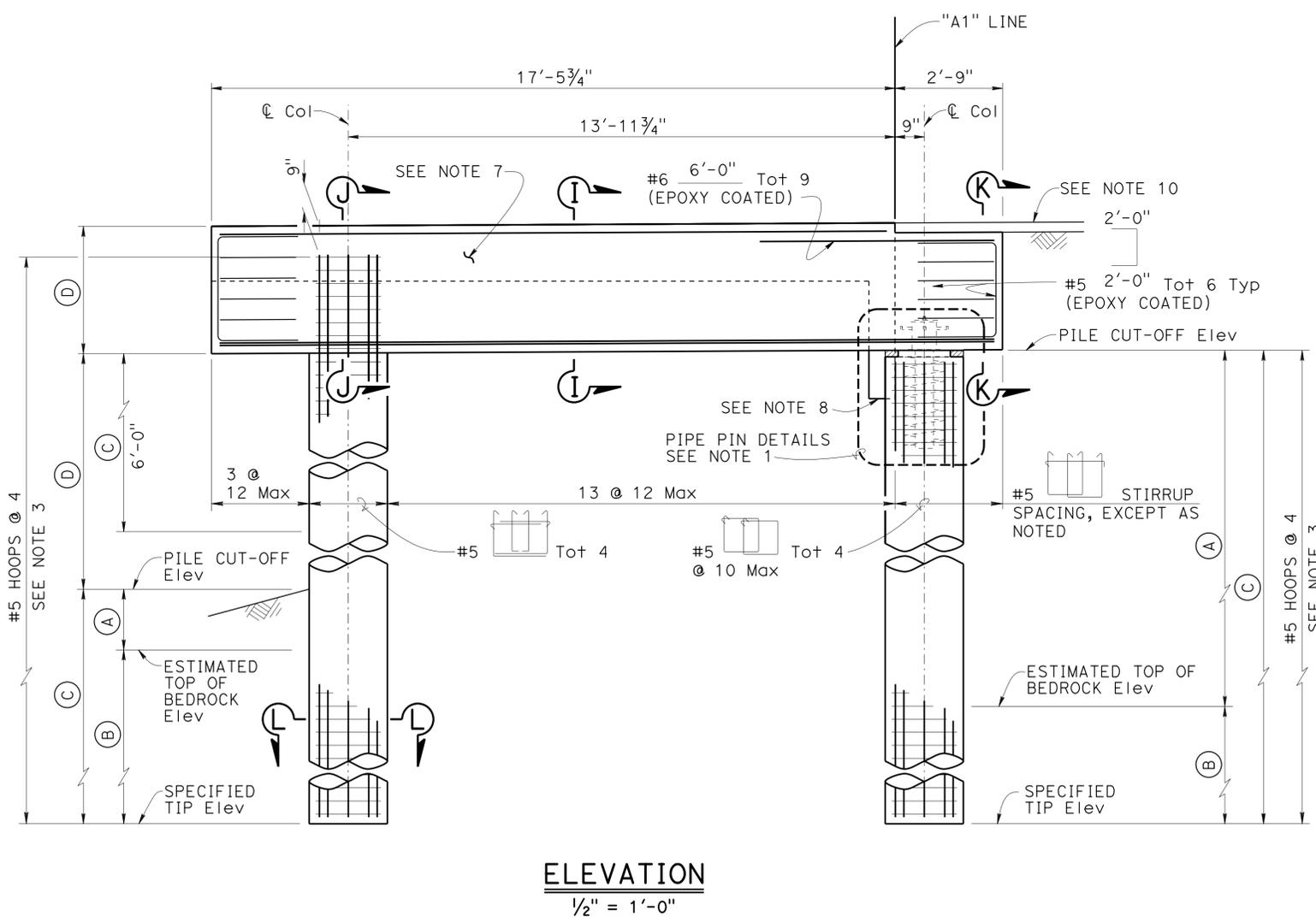
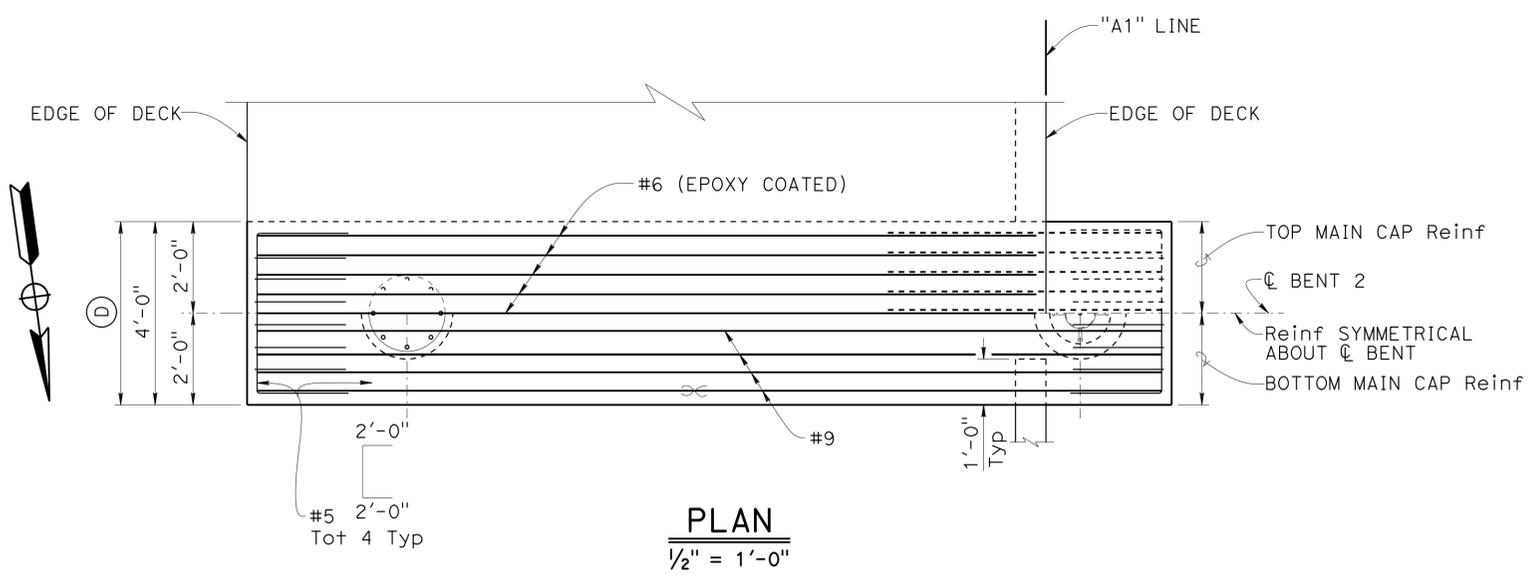
  

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0	1	2	3	UNIT: 3577 PROJECT NUMBER & PHASE: 0200020151	CONTRACT NO.: 02-3E7904	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET	OF
									7-2-13	6	26

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REGISTERED CIVIL ENGINEER			DATE	1-6-14	
PLANS APPROVAL DATE			03-26-14		
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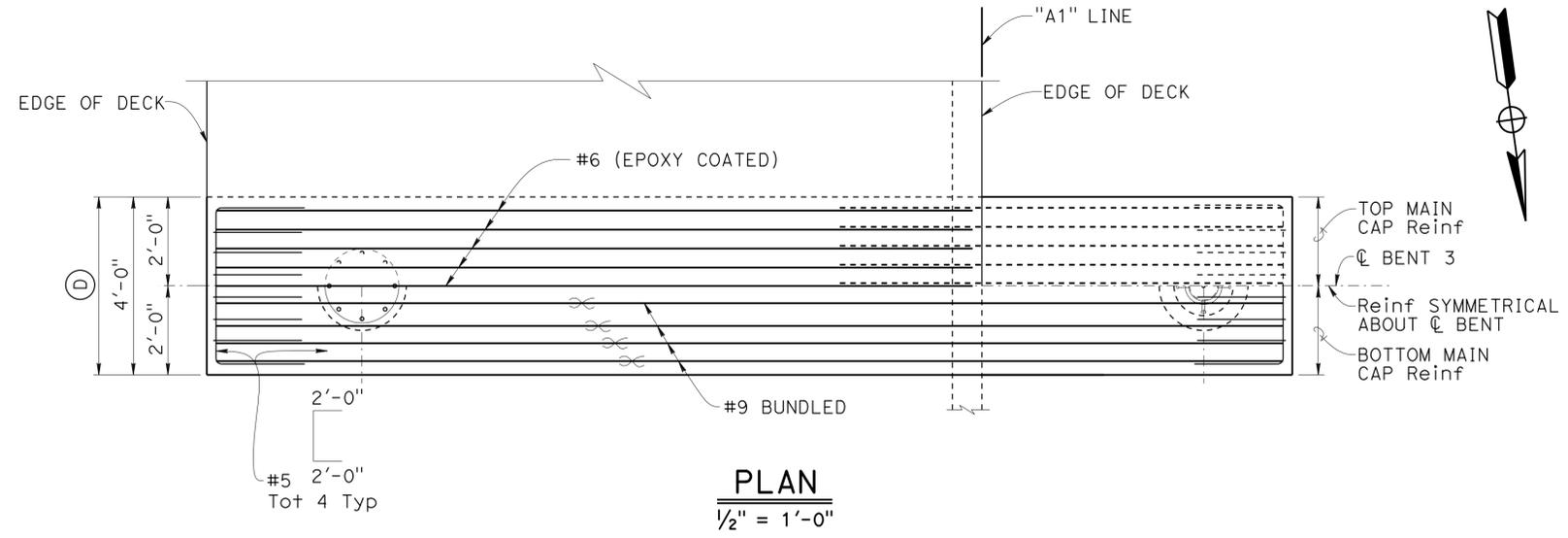
- NOTES:**
- For "PIPE PIN DETAILS", See "PIPE PIN DETAILS" sheet.
  - For details not shown or noted, see "SECTION J-J".
  - All hoops shall ultimate butt spliced continuous.
  - Splices not permitted in main cap bars except as shown.
  - Splices in Main Column and Main Pile reinforcement shall be ultimate butt type and must be staggered a minimum of 3'-0". Only one splice permitted per bar in each allowable splice zone.
  - Alternate 135° hooks for ties.
  - Deck slab reinforcement not shown for clarity.
  - Curtain wall discontinues at column.
  - For pile cutoff elevation, estimated top of bedrock elevation and specified tip elevation, see "PILE DATA TABLE" on "INDEX TO PLANS" sheet.
  - New overlay, see "ROAD PLANS".
- (A) Limits of payment for 24"  $\phi$  CIDH concrete pile.  
 (B) Limits of payment for 24"  $\phi$  CIDH concrete pile (Rock Socket)  
 (C) No splices in main reinforcement.  
 (D) Limits of payment for prepare and stain concrete.  
 ∞ Indicates bundled bars



**TYPICAL BENT COLUMN/CIDH PILE**

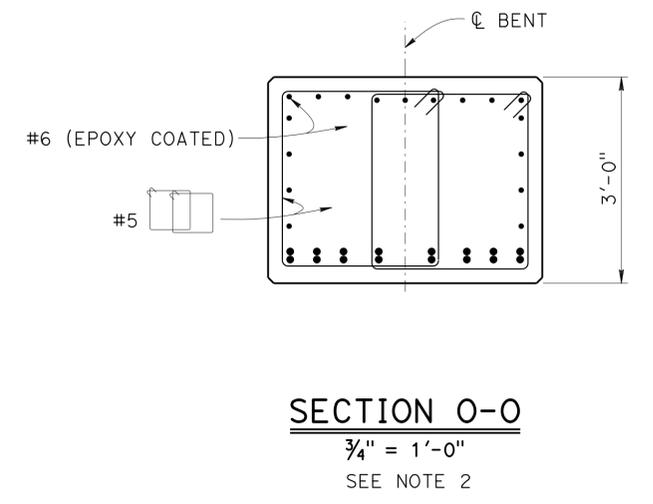
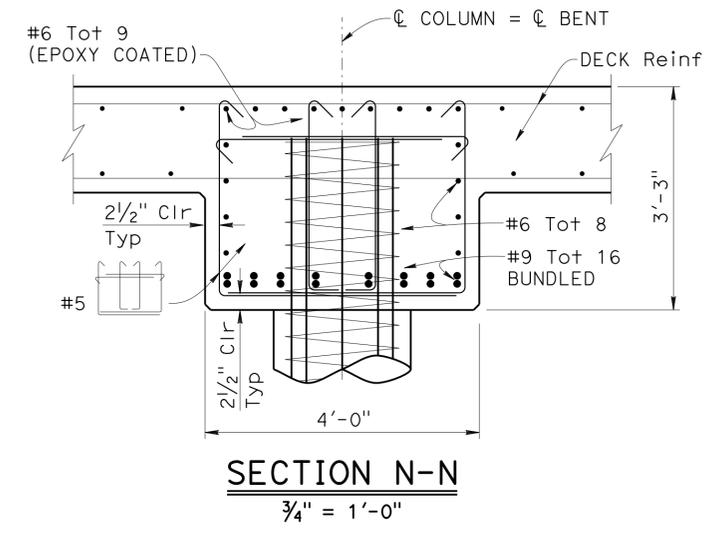
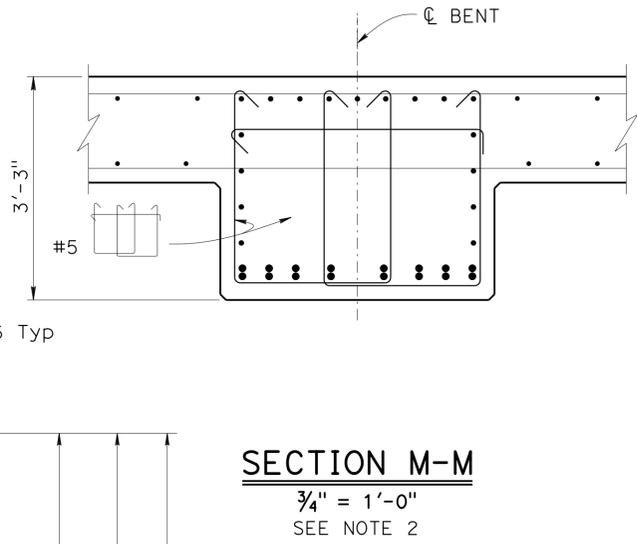
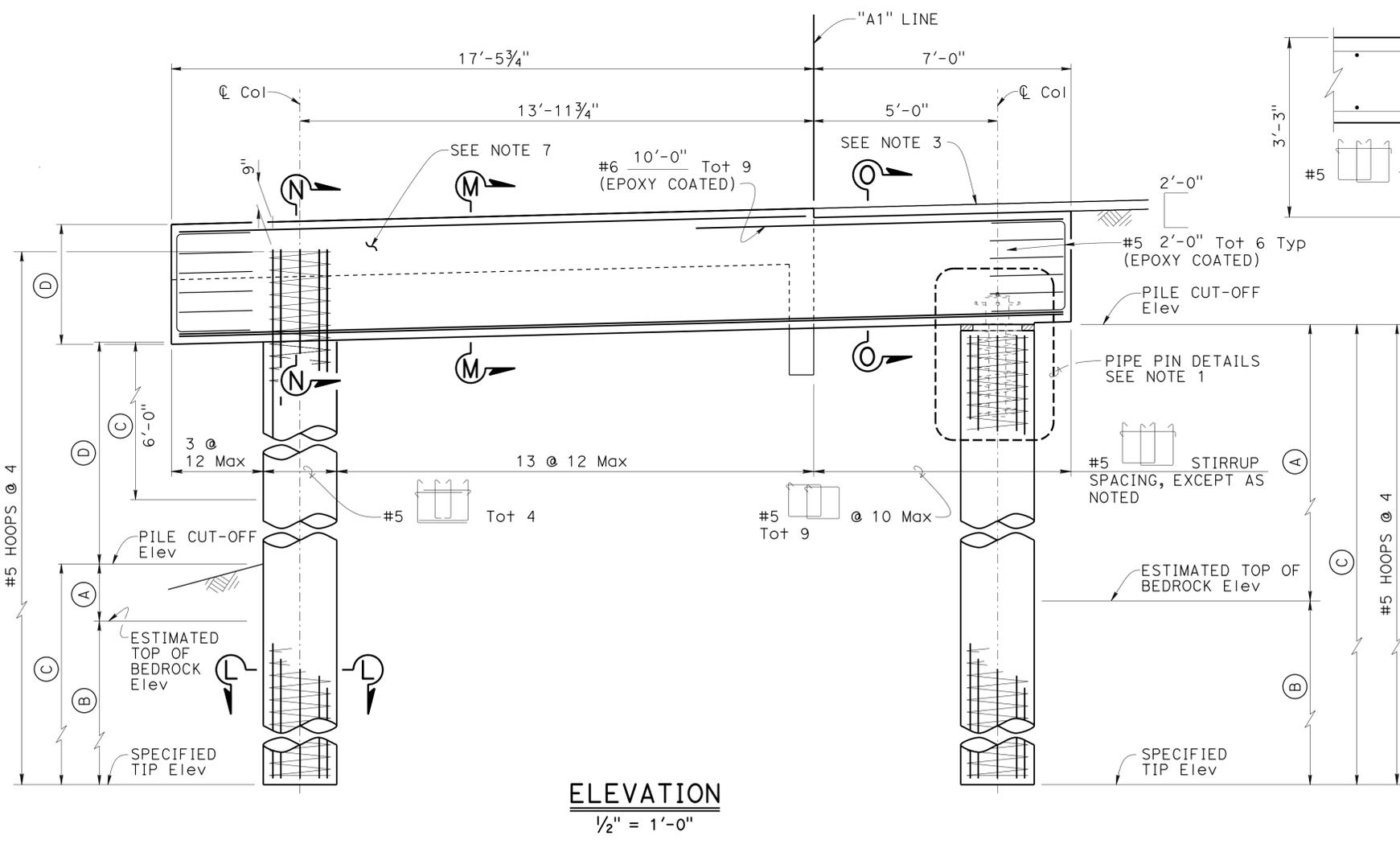
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	DESIGN	BY G. SLOCUM	CHECKED K. SELVENTHIRAN	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 2</b>	BRIDGE NO.	05-0091	<b>COLLINS BAR SIDEHILL VIADUCT No. 1</b> <b>BENT 2 DETAILS</b>
	DETAILS	BY C. FIGUERRES	CHECKED K. SELVENTHIRAN			POST MILE	12.53	
	QUANTITIES	BY G. SLOCUM	CHECKED K. SELVENTHIRAN			CONTRACT NO.:	02-3E7904	
UNIT: 3577 PROJECT NUMBER & PHASE: 0200020151					CONTRACT NO.: 02-3E7904		DISREGARD PRINTS BEARING EARLIER REVISION DATES	
							REVISION DATES	SHEET 7 OF 26

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	299	12.3/12.9	102	149
REGISTERED CIVIL ENGINEER			DATE	1-6-14	
PLANS APPROVAL DATE			03-26-14		
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



- NOTES:**
- For "PIPE PIN DETAILS", See "PIPE PIN DETAILS" sheet.
  - For details not shown or noted, see "SECTION N-N".
  - New overlay, see "ROAD PLANS".
  - Splices not permitted in main cap bars except as shown.
  - Splices in Main Column and Main Pile reinforcement shall be ultimate butt type and must be staggered a minimum of 3'-0". Only one splice permitted per bar in each allowable splice zone.
  - Alternate 135° hooks for ties.
  - Deck slab reinforcement not shown for clarity.
  - For "SECTION L-L" See "BENT 2 LAYOUT" sheet.
  - For pile cutoff elevation, estimated top of bedrock elevation and specified tip elevation, see "PILE DATA TABLE" on "INDEX TO PLANS" sheet.

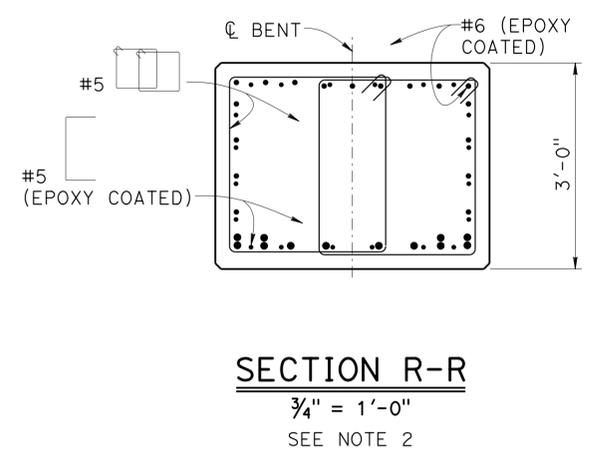
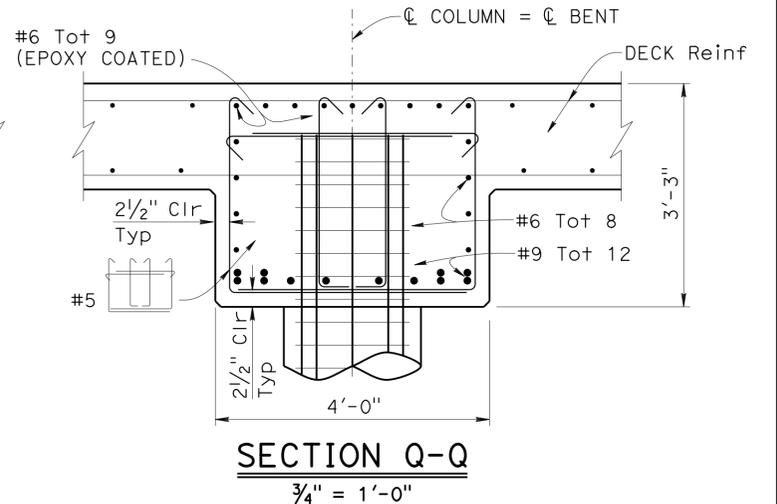
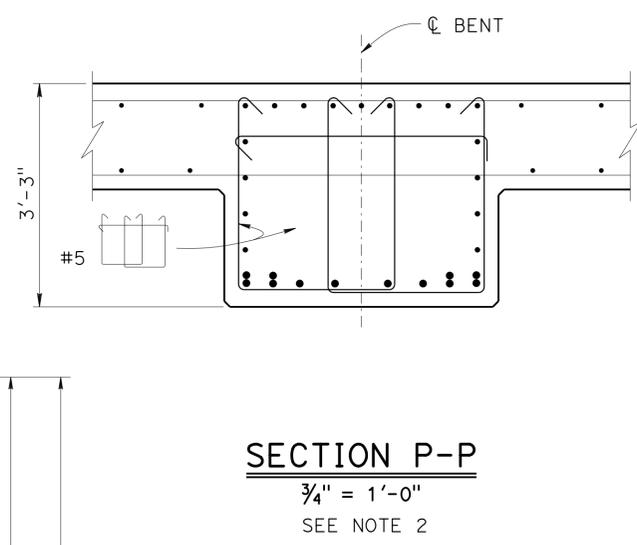
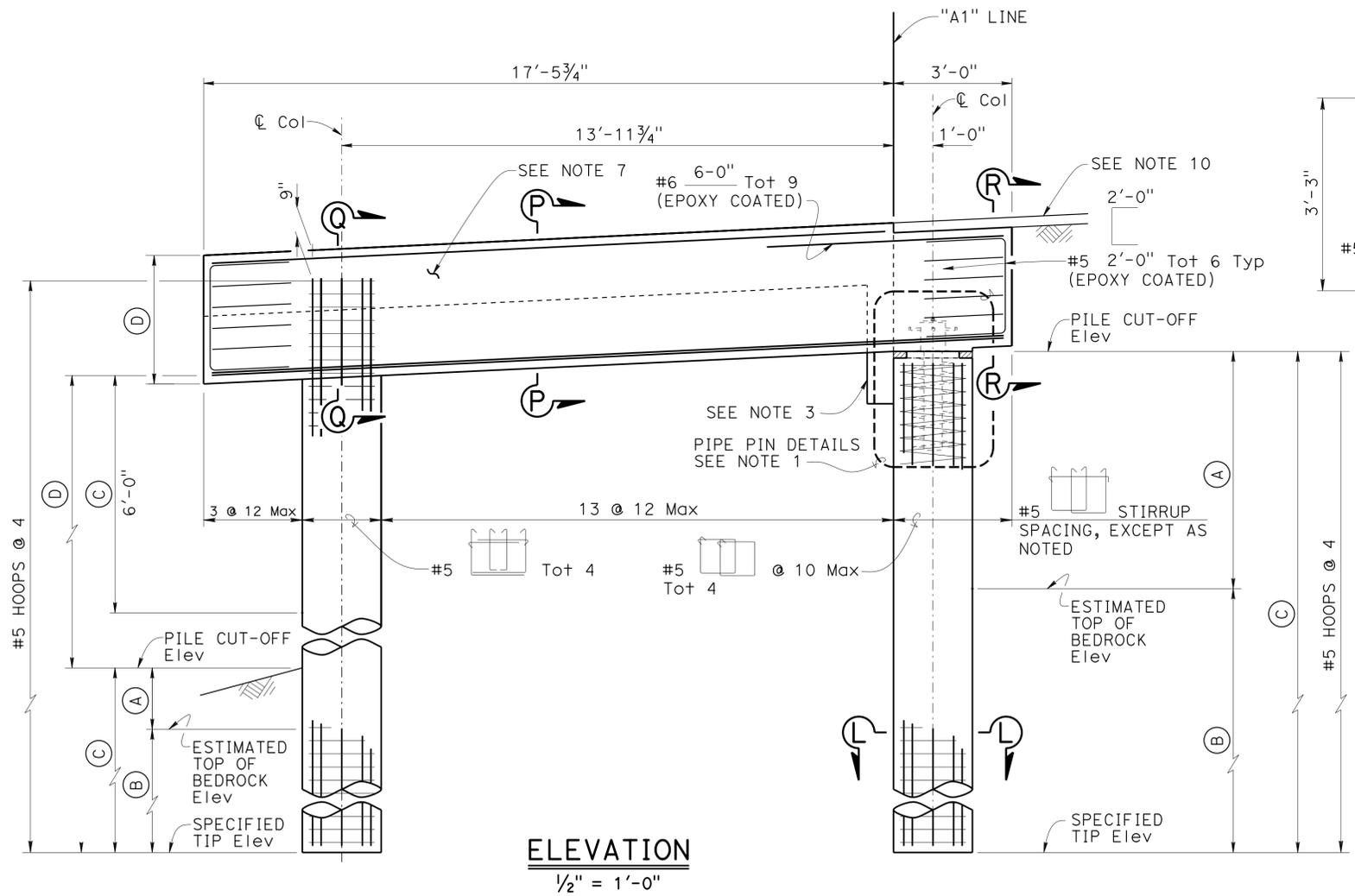
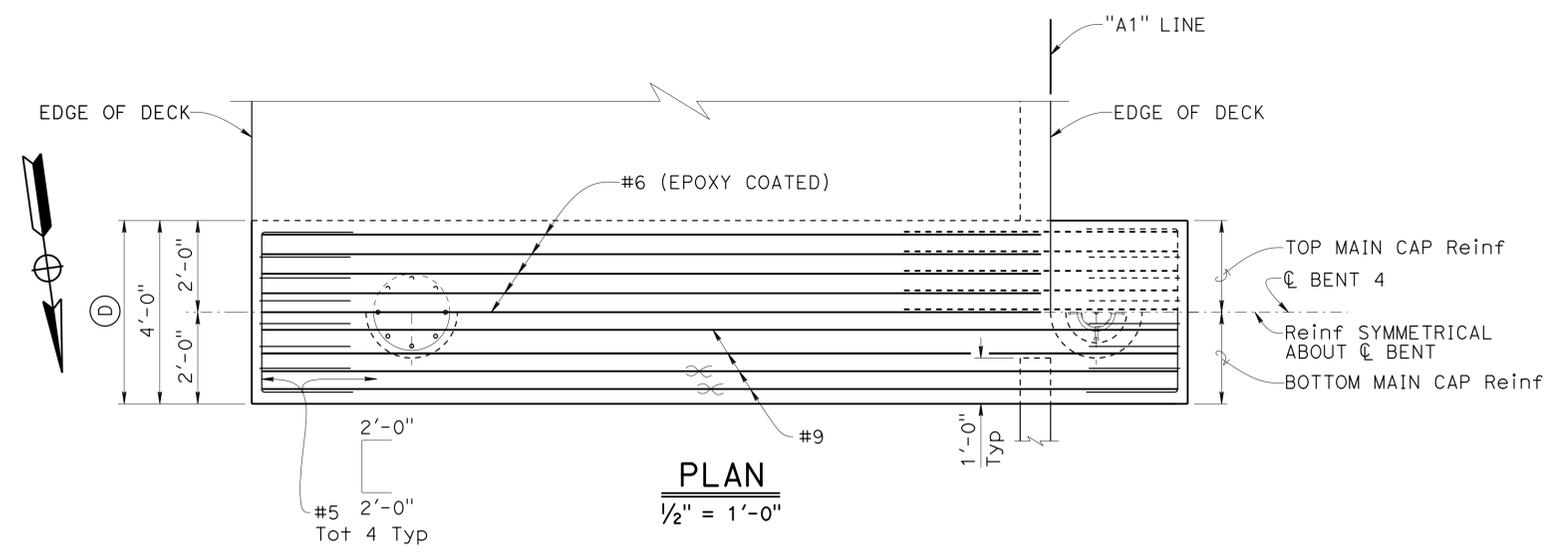
- (A) Limits of payment for 24" Ø CIDH concrete pile.
- (B) Limits of payment for 24" Ø CIDH concrete pile (Rock Socket)
- (C) No splices in main reinforcement.
- (D) Limits of payment for prepare and stain concrete.
- ∞ Indicates bundled bars



STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY G. SLOCUM	CHECKED K. SELVENTHIRAN	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 2</b>	BRIDGE NO.	05-0091	<b>COLLINS BAR SIDEHILL VIADUCT No. 1</b> <b>BENT 3 DETAILS</b>	
	DETAILS	BY C. FIGUERRES	CHECKED K. SELVENTHIRAN			POST MILE	12.53		
	QUANTITIES	BY G. SLOCUM	CHECKED K. SELVENTHIRAN			UNIT: 3577	PROJECT NUMBER & PHASE: 0200020151		CONTRACT NO.: 02-3E7904
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				0 1 2 3		DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES 4-08-13 7-3-13 3-28-15	SHEET 8 OF 26

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	299	12.3/12.9	103	149
REGISTERED CIVIL ENGINEER			DATE	1-6-14	
PLANS APPROVAL DATE			03-26-14		
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					

- NOTES:**
- For "PIPE PIN DETAILS", See "PIPE PIN DETAILS" sheet.
  - For details not shown or noted, see "SECTION Q-Q".
  - Curtain wall discontinues at column.
  - Splices not permitted in main cap bars except as shown.
  - Splices in main column and main pile reinforcement shall be butt spliced. Splices shall be ultimate butt type and must be staggered a minimum of 3'-0". Only one splice permitted per bar in each allowable splice zone.
  - Alternate 135° hooks for ties.
  - Deck slab reinforcement not shown for clarity.
  - For "SECTION L-L" See "BENT 2 LAYOUT" sheet.
  - For pile cutoff elevation, estimated top of bedrock elevation and specified tip elevation, see "PILE DATA TABLE" on "INDEX TO PLANS" sheet.
  - New overlay, see "ROAD PLANS".
- (A) Limits of payment for 24" Ø CIDH concrete pile.  
(B) Limits of payment for 24" Ø CIDH concrete pile (Rock Socket)  
(C) No splices in main reinforcement.  
(D) Limits of payment for prepare and stain concrete.  
∞ Indicates bundled bars



DESIGN	BY G. SLOCUM	CHECKED K. SELVENTHIRAN
DETAILS	BY C. FIGUERRES	CHECKED K. SELVENTHIRAN
QUANTITIES	BY G. SLOCUM	CHECKED K. SELVENTHIRAN

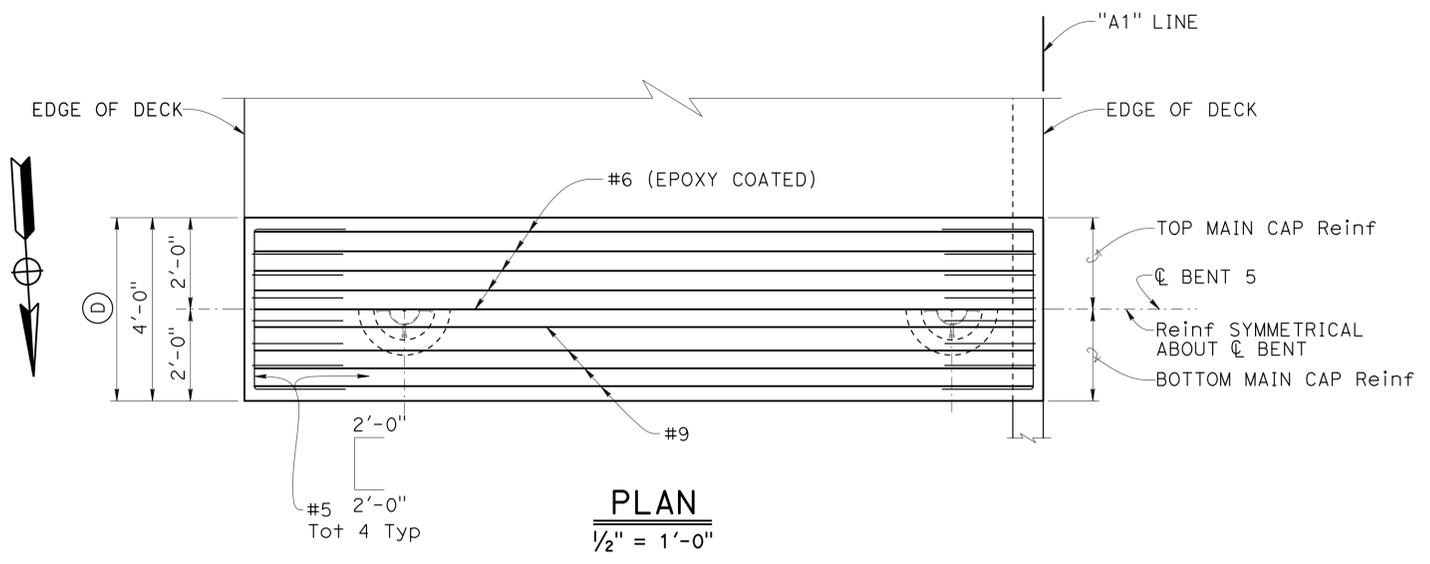
**STATE OF CALIFORNIA**  
DEPARTMENT OF TRANSPORTATION

**DIVISION OF ENGINEERING SERVICES**  
STRUCTURE DESIGN  
**DESIGN BRANCH 2**

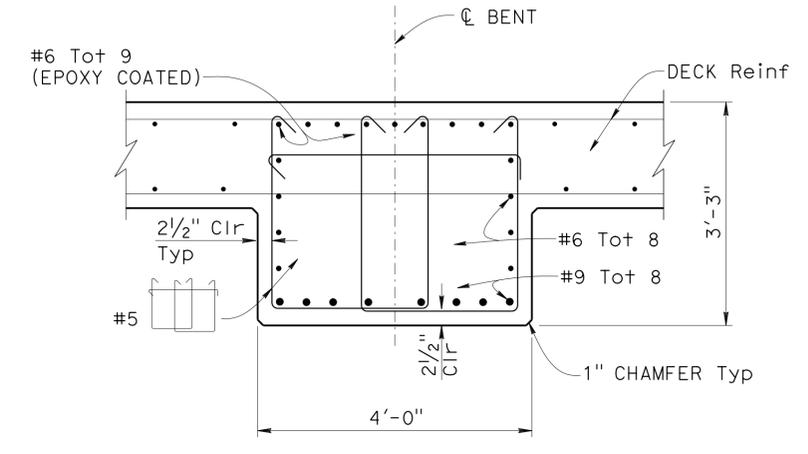
BRIDGE NO.	05-0091
POST MILE	12.53

**COLLINS BAR SIDEHILL VIADUCT No. 1**  
**BENT 4 DETAILS**

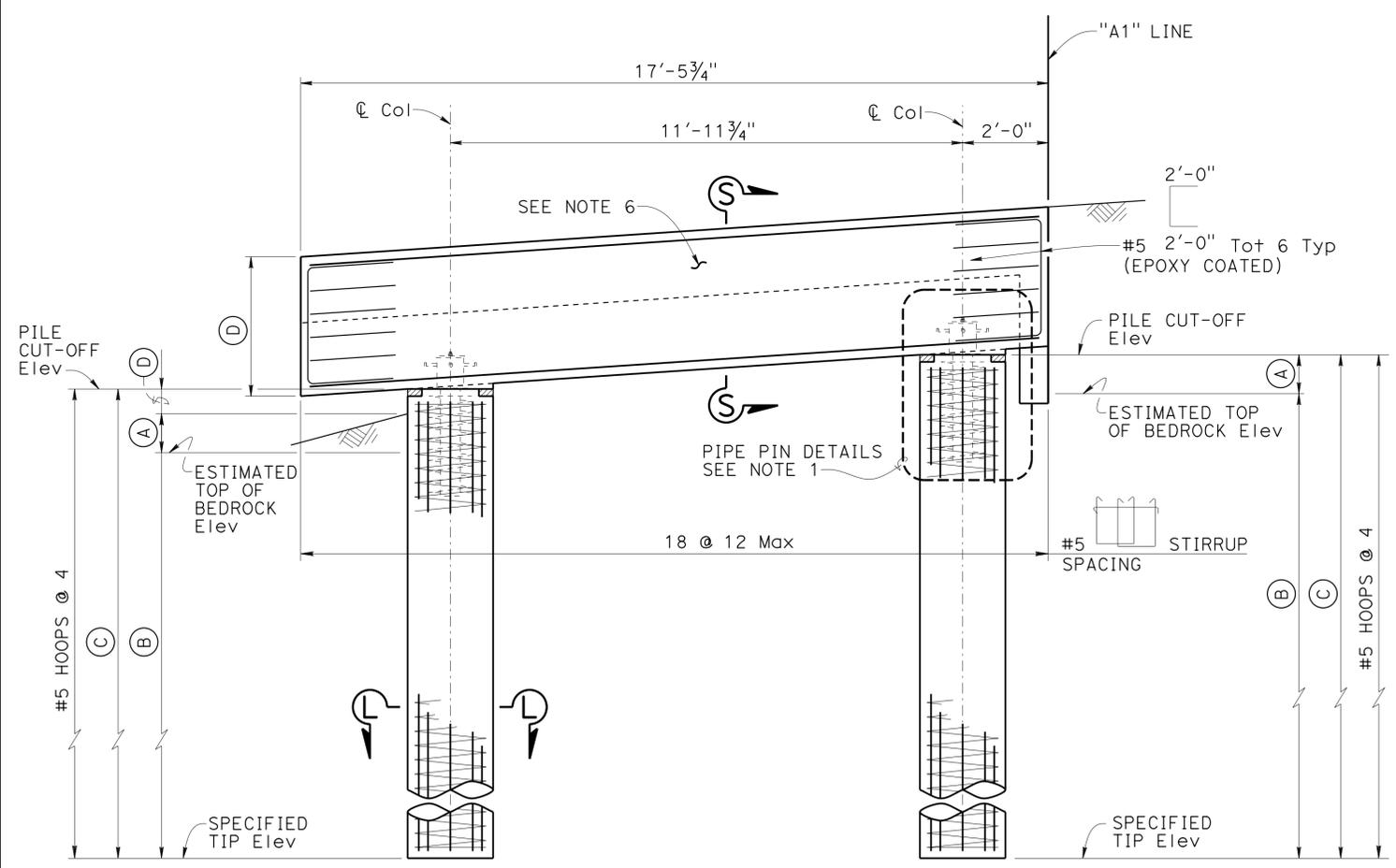
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	299	12.3/12.9	104	149
REGISTERED CIVIL ENGINEER			DATE	1-6-14	
PLANS APPROVAL DATE			03-26-14		
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**PLAN**  
1/2" = 1'-0"



**SECTION S-S**  
3/4" = 1'-0"



**ELEVATION**  
1/2" = 1'-0"

- NOTES:**
- For "PIPE PIN DETAILS", See "PIPE PIN DETAILS" sheet.
  - For "SECTION L-L" See "BENT 2 LAYOUT" sheet.
  - For pile cutoff elevation, estimated top of bedrock elevation and specified tip elevation, see "PILE DATA TABLE" on "INDEX TO PLANS" sheet.
  - Splices not permitted in main cap bars except as shown.
  - Alternate 135° hooks for ties.
  - Deck slab reinforcement not shown for clarity.
- (A) Limits of payment for 24" Ø CIDH concrete pile.  
(B) Limits of payment for 24" Ø CIDH concrete pile (Rock Socket)  
(C) No splices in main reinforcement.  
(D) Limits of payment for prepare and stain concrete.  
∞ Indicates bundled bars

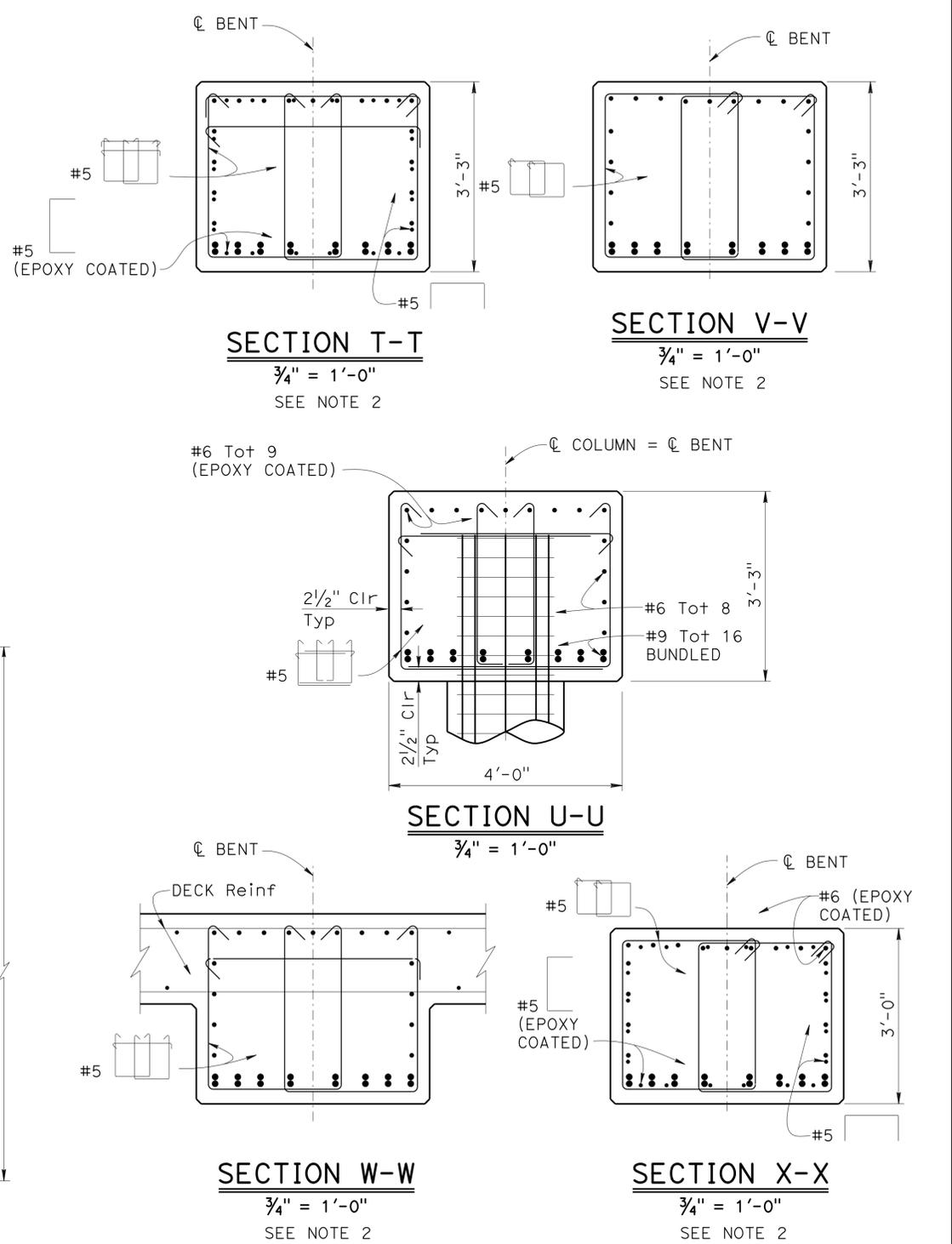
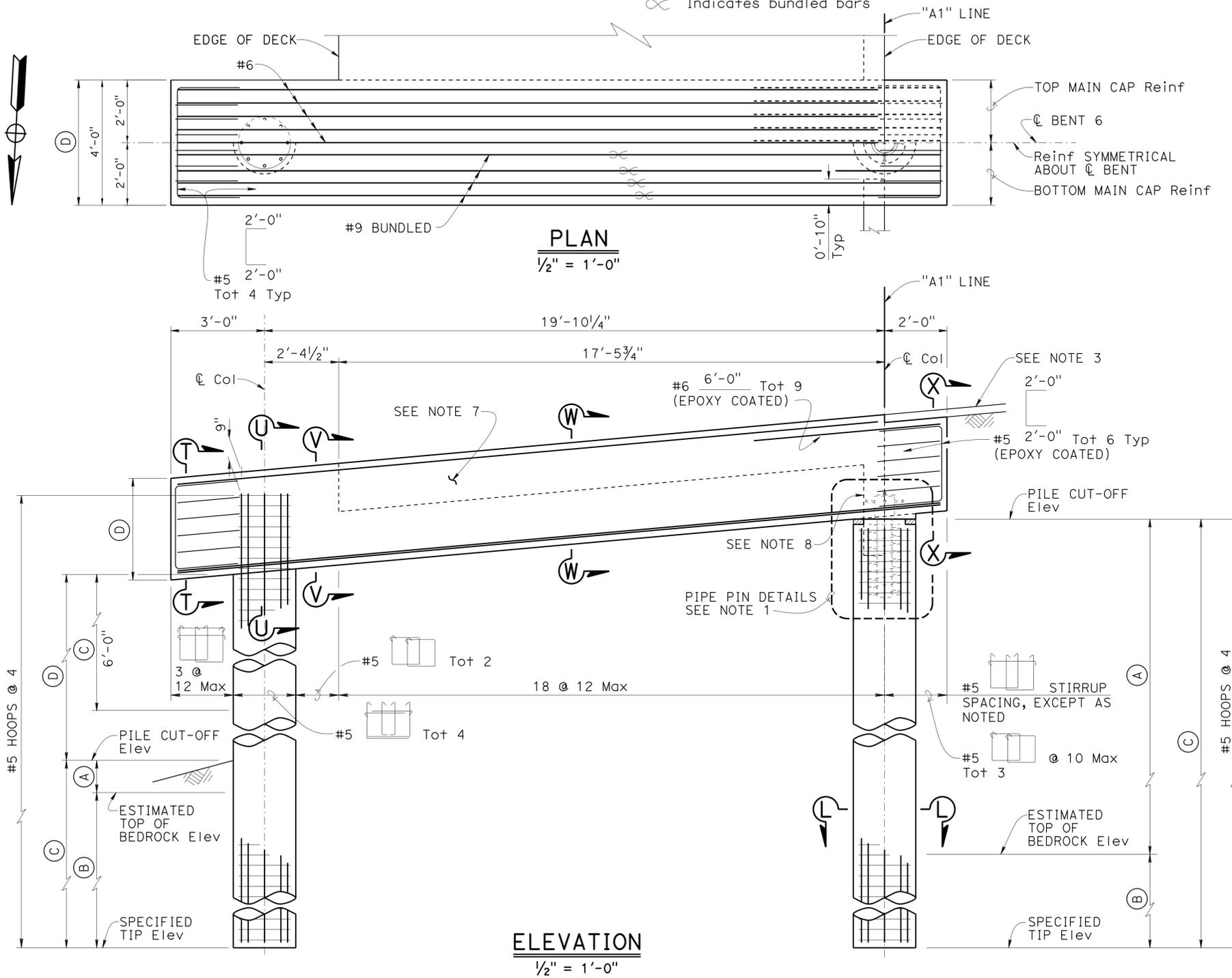
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY G. SLOCUM	CHECKED K. SELVENTHIRAN	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 2</b>	BRIDGE NO.	05-0091	<b>COLLINS BAR SIDEHILL VIADUCT No. 1</b> <b>BENT 5 DETAILS</b>
	DETAILS	BY C. FIGUERRES	CHECKED K. SELVENTHIRAN			POST MILE	12.53	
	QUANTITIES	BY G. SLOCUM	CHECKED K. SELVENTHIRAN			UNIT: 3577	PROJECT NUMBER & PHASE: 0200020151	
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				0 1 2 3		REVISION DATES		SHEET 10 OF 26

**NOTES:**

1. For "PIPE PIN DETAILS", See "PIPE PIN DETAILS" sheet.
2. For details not shown or noted, see "SECTION U-U".
3. New overlay, see "ROAD PLANS".
4. Splices not permitted in main cap bars except as shown.
5. Splices in Main Column and Main Pile reinforcement shall be ultimate butt type and must be staggered a minimum of 3'-0". Only one splice permitted per bar in each allowable splice zone.
6. Alternate 135° hooks for ties.
7. Deck slab reinforcement not shown for clarity.
8. Curtain wall discontinues at column.

9. For pile cutoff elevation, estimated top of bedrock elevation and specified tip elevation, see "PILE DATA TABLE" on "INDEX TO PLANS" sheet.
  10. For "SECTION L-L", see "BENT 2 LAYOUT" sheet.
- (A) Limits of payment for 24"  $\phi$  CIDH concrete pile.
  - (B) Limits of payment for 24"  $\phi$  CIDH concrete pile (Rock Socket)
  - (C) No splices in main reinforcement.
  - (D) Limits of payment for prepare and stain concrete.
  - $\infty$  Indicates bundled bars

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	299	12.3/12.9	105	149
			1-6-14	DATE	
REGISTERED CIVIL ENGINEER					
03-26-14			PLANS APPROVAL DATE		
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DESIGN	BY G. SLOCUM	CHECKED K. SELVENTHIRAN
DETAILS	BY C. FIGUERRES	CHECKED K. SELVENTHIRAN
QUANTITIES	BY G. SLOCUM	CHECKED K. SELVENTHIRAN

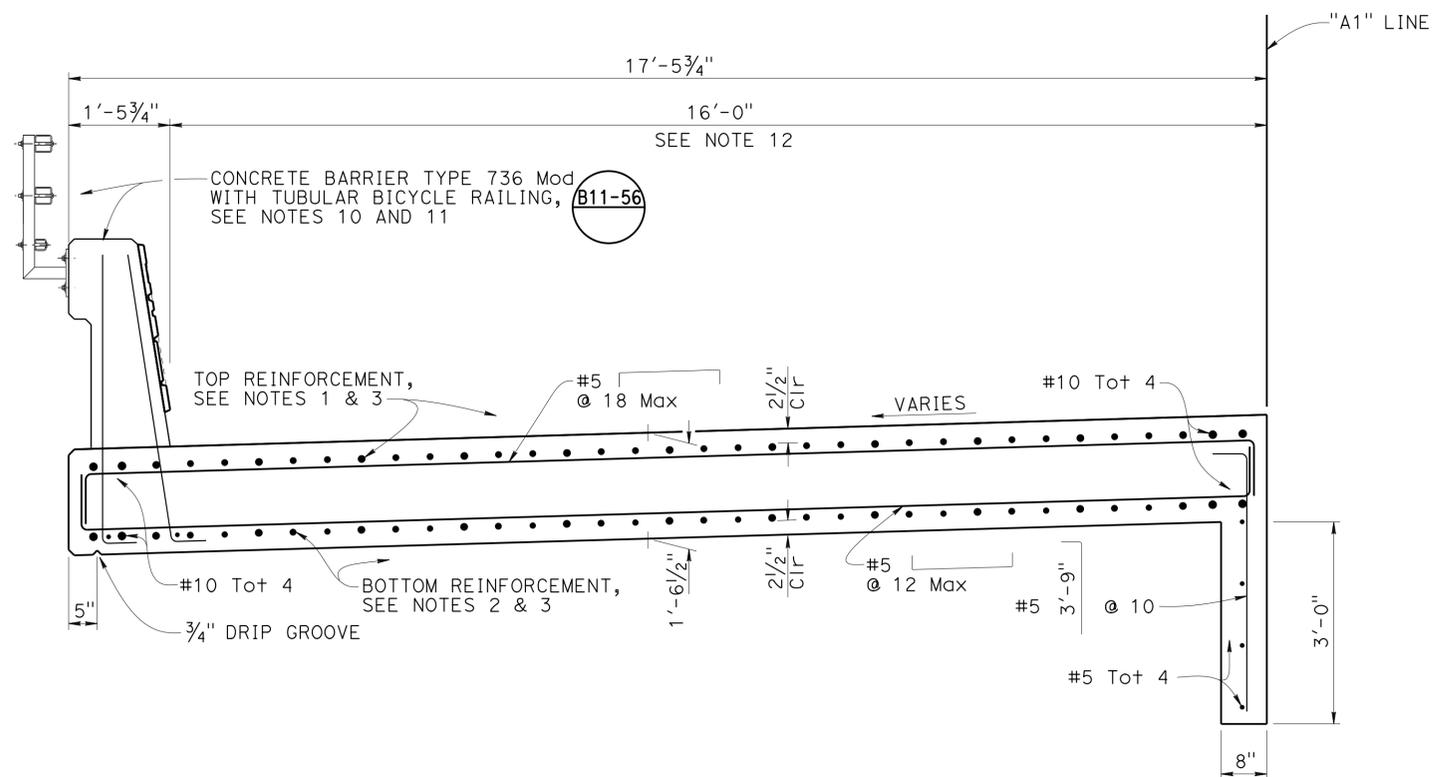
**STATE OF CALIFORNIA**  
DEPARTMENT OF TRANSPORTATION

**DIVISION OF ENGINEERING SERVICES**  
STRUCTURE DESIGN  
**DESIGN BRANCH 2**

BRIDGE NO.	05-0091
POST MILE	12.53

**COLLINS BAR SIDEHILL VIADUCT No. 1**  
**BENT 6 DETAILS**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	299	12.3/12.9	106	149
			1-6-14	DATE	
REGISTERED CIVIL ENGINEER			DATE		
03-26-14			PLANS APPROVAL DATE		
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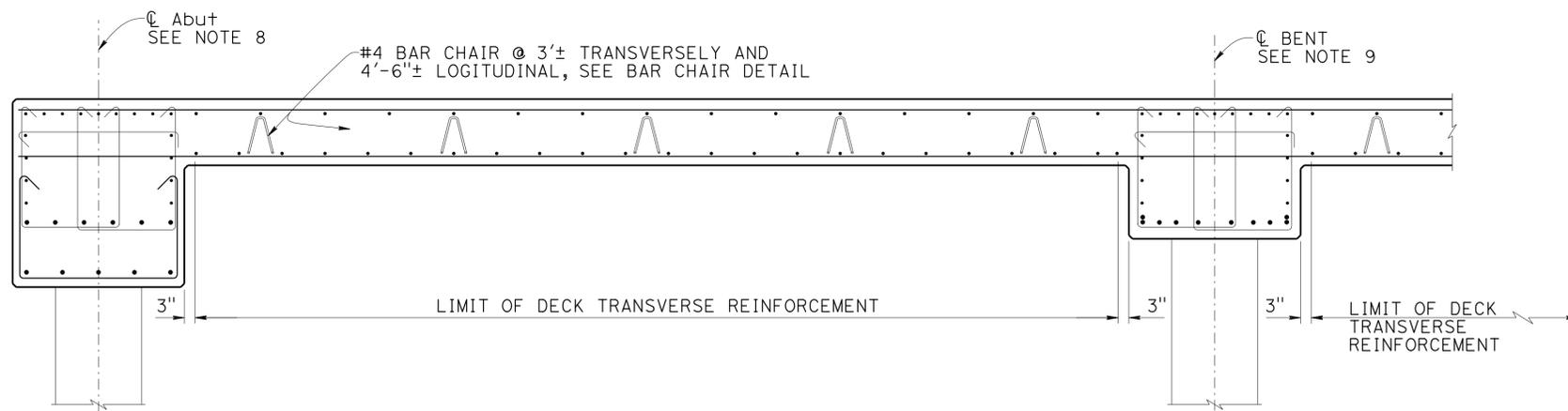


**TYPICAL SECTION**

3/4" = 1'-0"

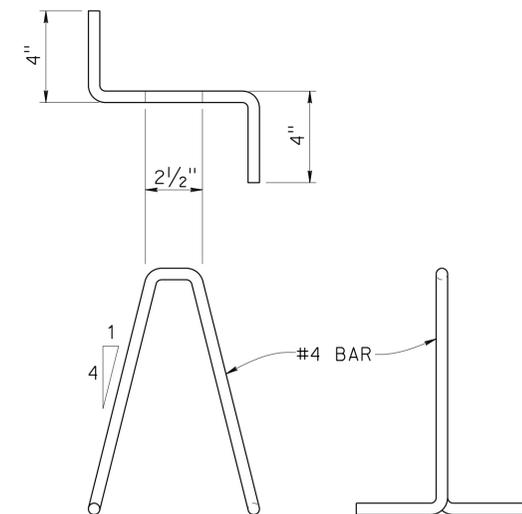
**NOTES:**

1. For slab top reinforcement, see "TOP DECK REINFORCEMENT" sheet.
2. For slab bottom reinforcement, see "BOTTOM DECK REINFORCEMENT" sheet.
3. All barrier and slab top mat reinforcement shall be epoxy coated.
4. Transverse slab reinforcement shall be perpendicular to "A1" Line.
5. Spacing of all transverse bars is measured along "A1" Line.
6. Splices in top longitudinal bars to be located near center of span.
7. Splices in bottom longitudinal bars to be located near bent.
8. For abutment reinforcement, see "ABUTMENT DETAIL No. 2" sheet.
9. For bent cap reinforcement, see Bent Layout sheets.
10. For inside face of barrier rail, see "ARCHITECTURAL TREATMENT" sheet.
11. See "TUBULAR BICYCLE RAILING DETAILS" sheet.
12. Prepare concrete bridge deck surface and place 1" polyester concrete overlay.



**LONGITUDINAL SECTION**

1/2" = 1'-0"



**BAR CHAIR DETAIL**

3" = 1'-0"

DESIGN	BY G. SLOCUM	CHECKED K. SELVENTHIRAN
DETAILS	BY C. FIGUERRES	CHECKED K. SELVENTHIRAN
QUANTITIES	BY G. SLOCUM	CHECKED K. SELVENTHIRAN

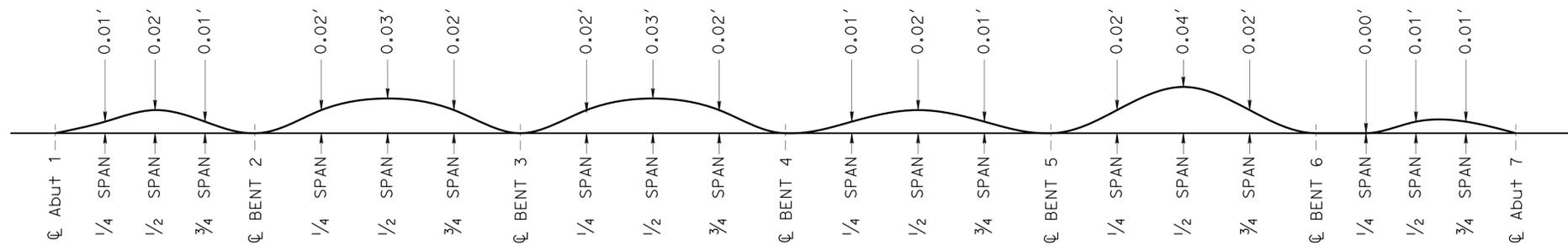
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 2

BRIDGE NO.	05-0091
POST MILE	12.53

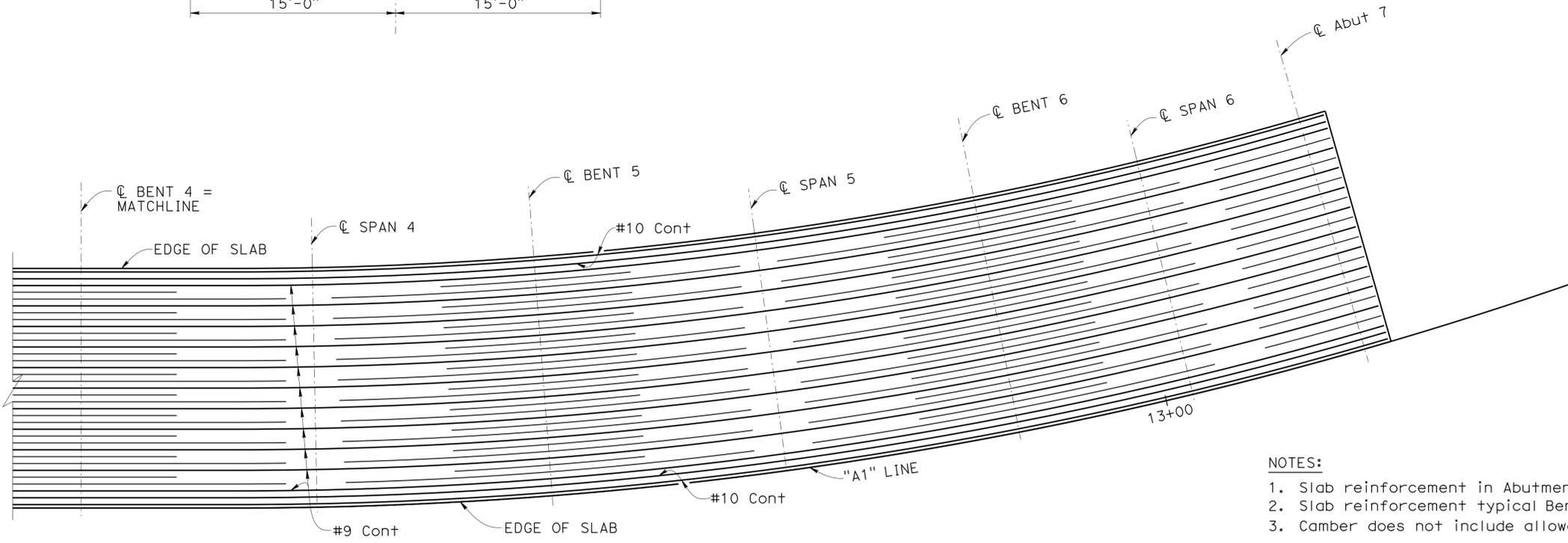
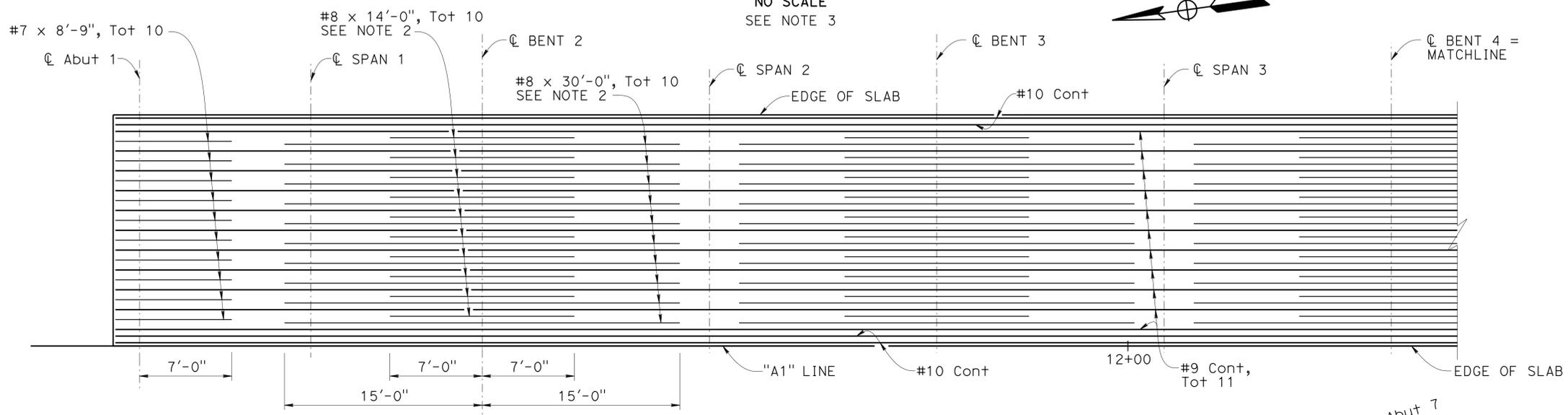
COLLINS BAR SIDEHILL VIADUCT No. 1  
TYPICAL SECTION

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	299	12.3/12.9	107	149
			1-6-14	DATE	
REGISTERED CIVIL ENGINEER			DATE		
03-26-14			PLANS APPROVAL DATE		
REGISTERED PROFESSIONAL ENGINEER K. SELVENTHIRAN No. C67973 Exp. 06-30-15 CIVIL STATE OF CALIFORNIA					
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**CAMBER DIAGRAM**

NO SCALE  
SEE NOTE 3



**TOP SLAB REINFORCEMENT**

1" = 5'-0"

**NOTES:**

1. Slab reinforcement in Abutment 1 is similar to Abutment 7.
2. Slab reinforcement typical Bents 2 through 6.
3. Camber does not include allowance for falsework settlement.

DESIGN	BY G. SLOCUM	CHECKED K. SELVENTHIRAN
DETAILS	BY C. FIGUERRES	CHECKED K. SELVENTHIRAN
QUANTITIES	BY G. SLOCUM	CHECKED K. SELVENTHIRAN

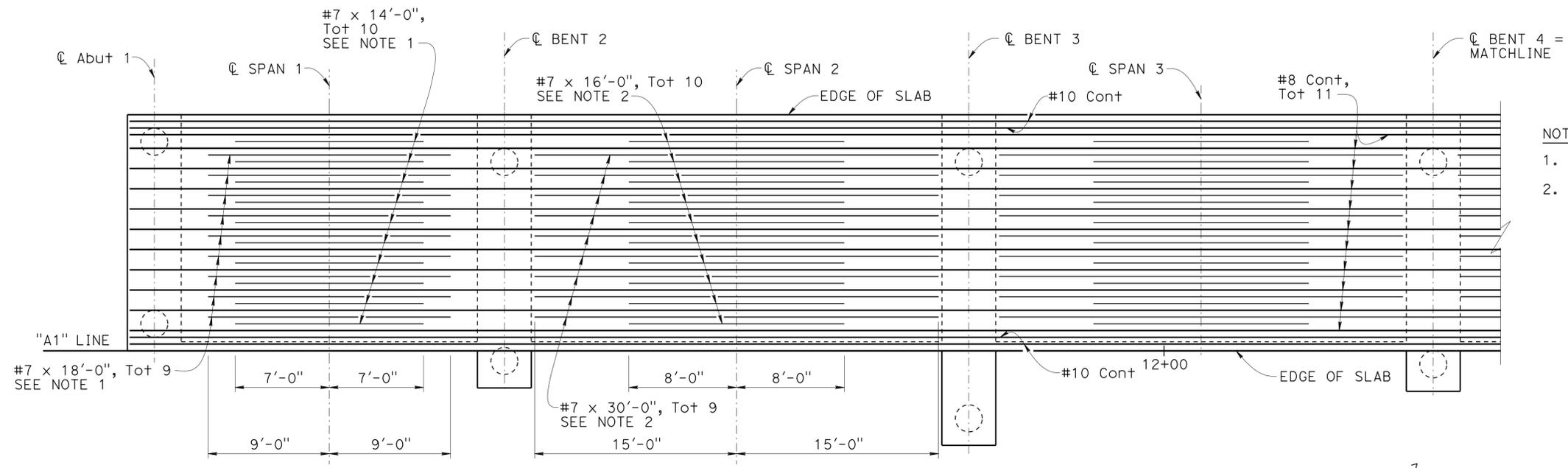
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 2

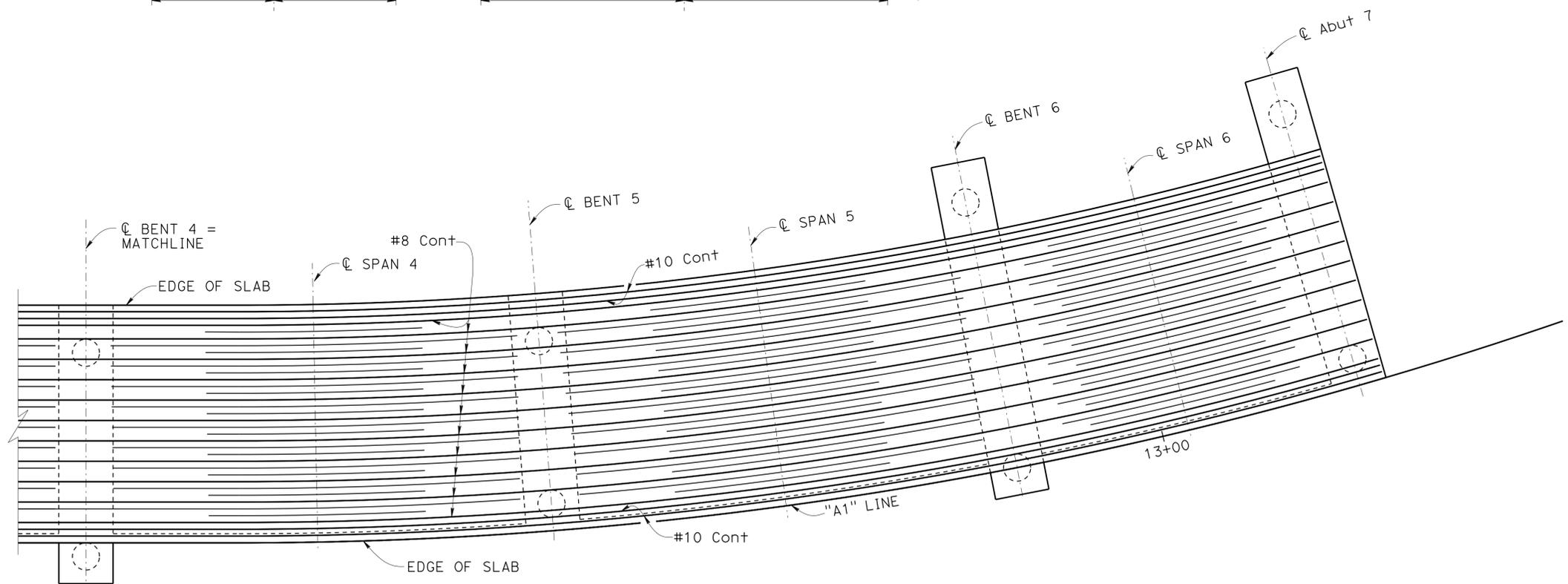
BRIDGE NO.	05-0091
POST MILE	12.53

**COLLINS BAR SIDEHILL VIADUCT No. 1**  
**TOP DECK REINFORCEMENT**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	299	12.3/12.9	108	149
			1-6-14	REGISTERED CIVIL ENGINEER DATE	
			03-26-14	PLANS APPROVAL DATE	
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



- NOTES:
- Slab reinforcement in Span 1 is similar to Span 6.
  - Slab reinforcement typical Spans 2 through 5.



**BOTTOM SLAB REINFORCEMENT**  
1" = 5'-0"

DESIGN	BY G. SLOCUM	CHECKED K. SELVENTHIRAN
DETAILS	BY C. FIGUERRES	CHECKED K. SELVENTHIRAN
QUANTITIES	BY G. SLOCUM	CHECKED K. SELVENTHIRAN

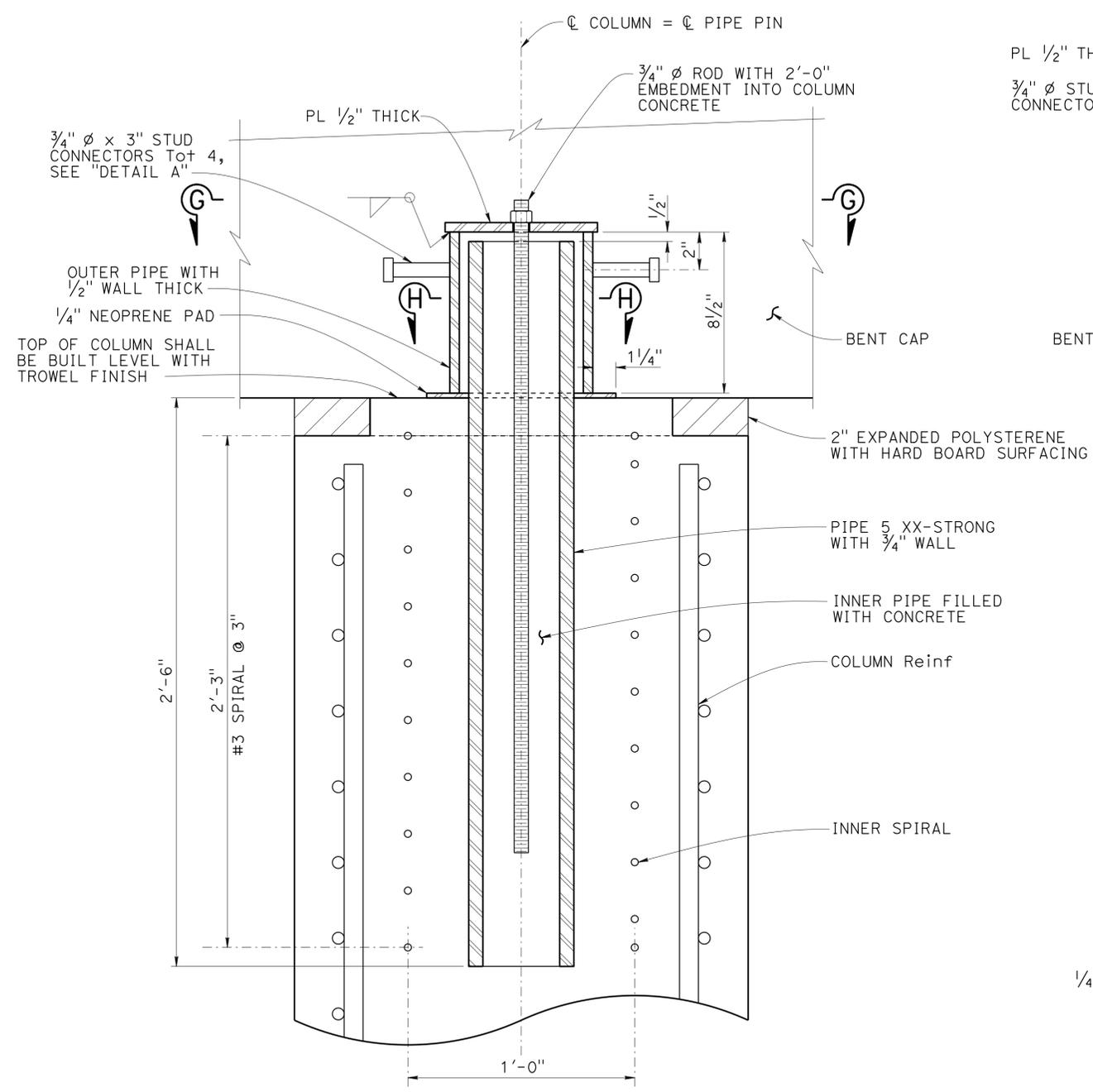
**STATE OF CALIFORNIA**  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
**DESIGN BRANCH 2**

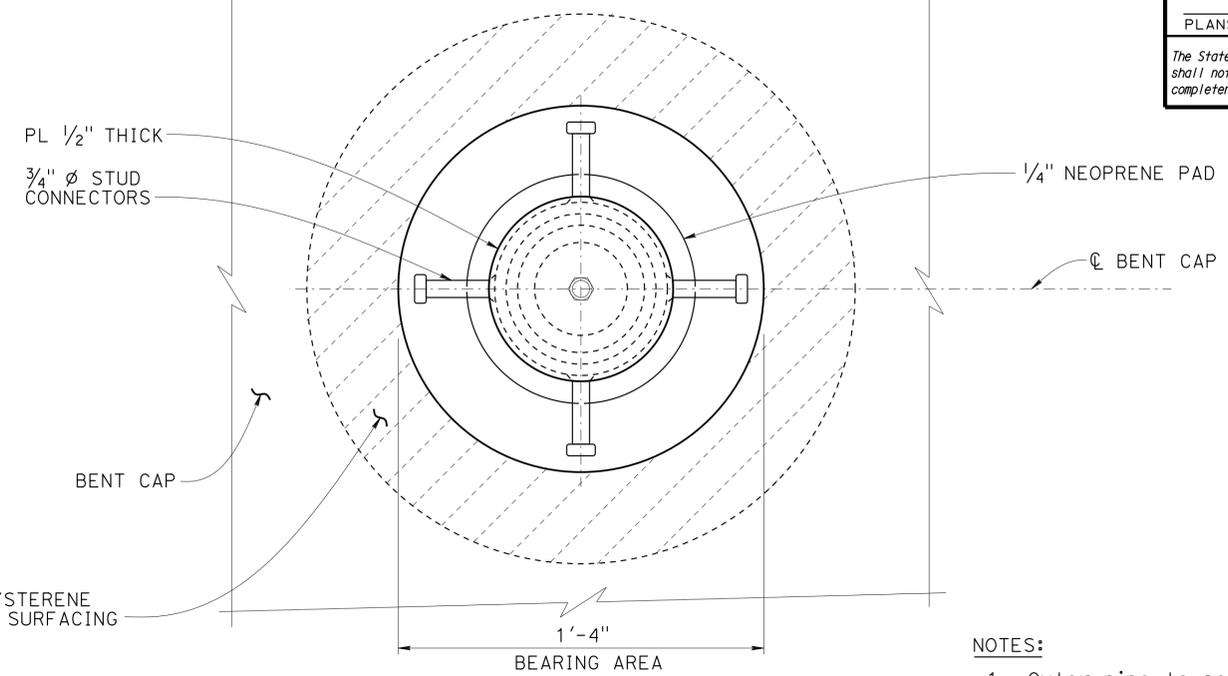
BRIDGE NO.	05-0091
POST MILE	12.53

**COLLINS BAR SIDEHILL VIADUCT No. 1**  
**BOTTOM DECK REINFORCEMENT**

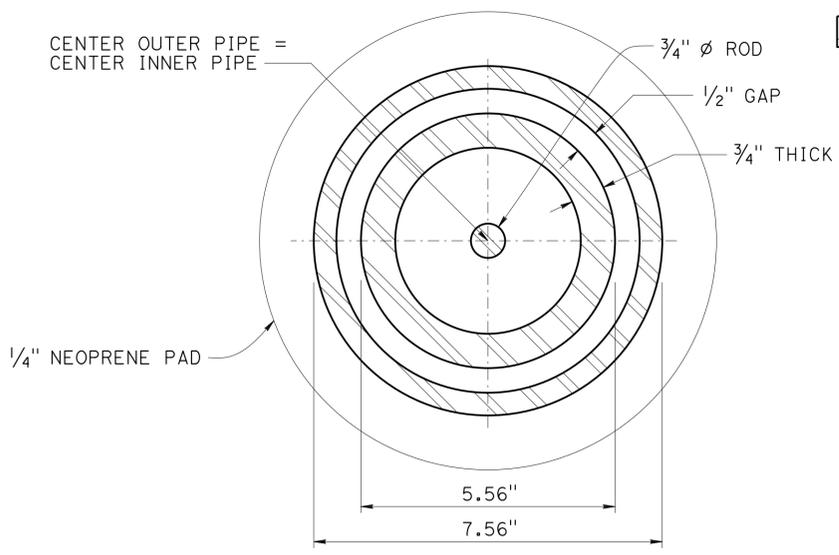
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	299	12.3/12.9	109	149
			1-6-14	REGISTERED CIVIL ENGINEER DATE	
			03-26-14	PLANS APPROVAL DATE	
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					



**ELEVATION**  
3" = 1'-0"



**VIEW G-G**  
3" = 1'-0"

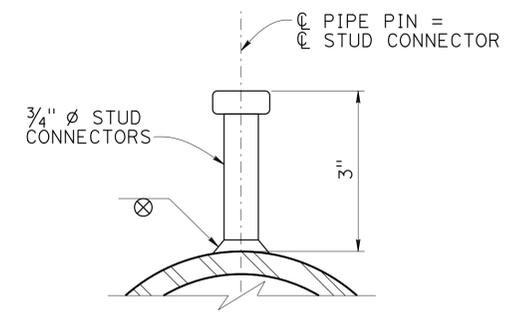


**SECTION H-H**  
6" = 1'-0"

- NOTES:**
- Outer pipe to seat tightly against 1/4" thick neoprene gasket placed on concrete around pipe pin.
  - Adjust spacing of main bent cap reinforcement to allow placement of pipe pin.
  - Details drawn showing level bent cap. Cap bearing surface may protrude below cap soffit when cap is not level.
  - Galvanize all pipe pin components, excluding inner spiral after fabrication

Indicates 2" expanded polystyrene with hard board surfacing to be removed after completion of bent cap.

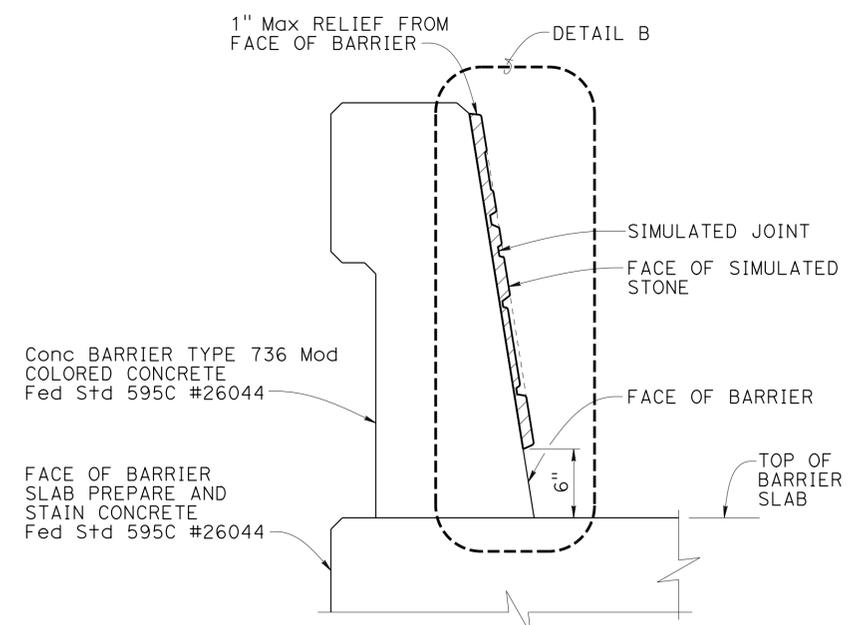
**B0-13**  
13-1



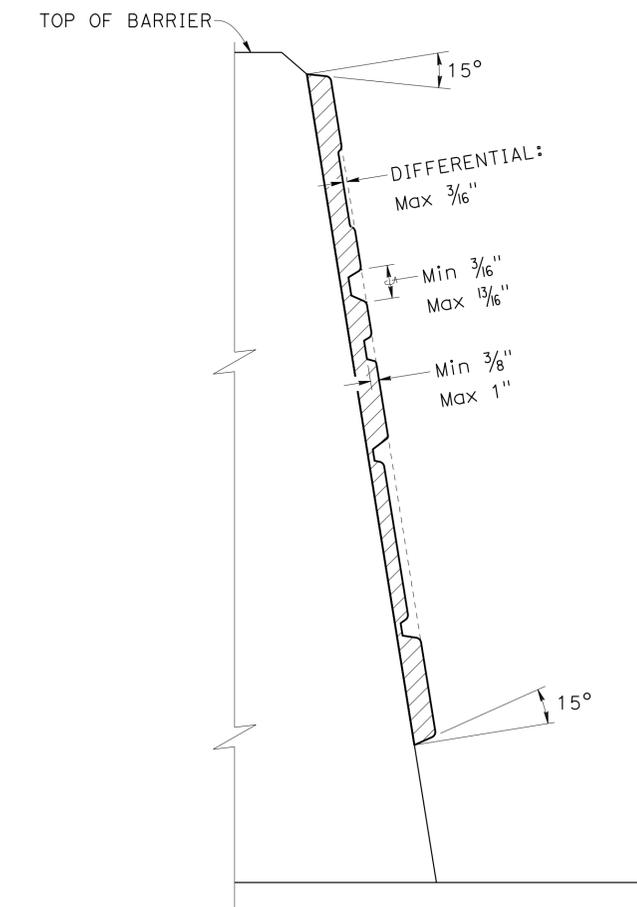
**DETAIL A**  
6" = 1'-0"

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	DESIGN	BY G. SLOCUM	CHECKED K. SELVENTHIRAN	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 2</b>	BRIDGE NO.	05-0091	<b>COLLINS BAR SIDEHILL VIADUCT No. 1</b> <b>PIPE PIN DETAILS</b>	
	DETAILS	BY C. FIGUERRES	CHECKED K. SELVENTHIRAN			POST MILE	12.53		
	QUANTITIES	BY G. SLOCUM	CHECKED K. SELVENTHIRAN			CONTRACT NO.:	02-3E7904		
				UNIT: 3577	PROJECT NUMBER & PHASE: 0200020151	DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES 1-17-12 4-24-13 5-15-13	SHEET 15 OF 26

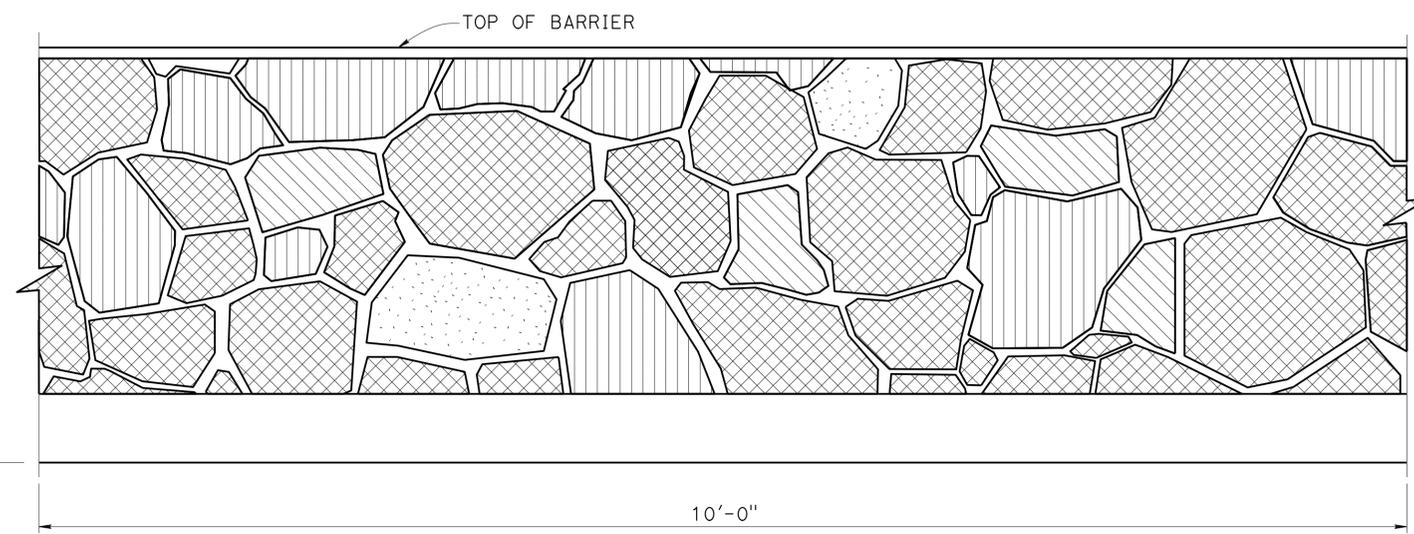
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	299	12.3/12.9	110	149
			1-6-14	REGISTERED CIVIL ENGINEER DATE	
			03-26-14	PLANS APPROVAL DATE	
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**SECTION A-A**  
1" = 1'-0"



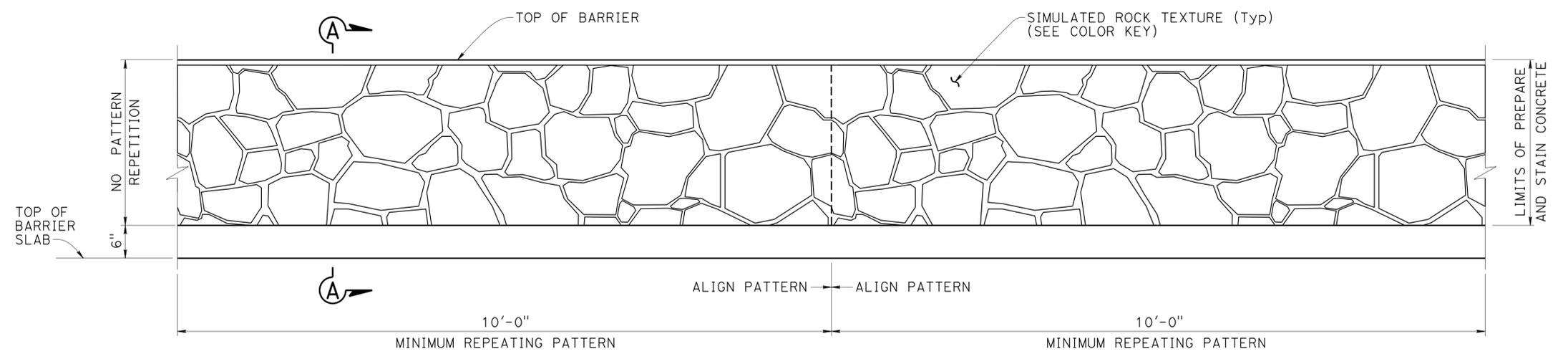
**DETAIL B**  
3" = 1'-0"



**COLOR KEY**  
1/2" = 1'-0"

**BASE COLOR LEGEND:**

	COLORED CONCRETE FEDERAL STANDARD 595C-26044 (VERY DARK GREY)
	75% CONCRETE STAIN FEDERAL STANDARD 595C-26008 (DARK GRAY)
	20% CONCRETE STAIN FEDERAL STANDARD 595C-26122 (GREY BROWN)
	2% CONCRETE STAIN FEDERAL STANDARD 595C-26493 (LIGHT GRAY)
	3% CONCRETE STAIN FEDERAL STANDARD 595C-32169 (RUST)



**SIMULATED ROCK TEXTURE  
ELEVATION**  
1" = 1'-0"

DESIGN	BY G. SLOCUM	CHECKED K. SELVENTHIRAN
DETAILS	BY C. FIGUERRES	CHECKED K. SELVENTHIRAN
QUANTITIES	BY G. SLOCUM	CHECKED K. SELVENTHIRAN

**STATE OF CALIFORNIA**  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
**DESIGN BRANCH 2**

BRIDGE NO.	05-0091
POST MILE	12.53

**COLLINS BAR SIDEHILL VIADUCT No. 1**  
**ARCHITECTURAL TREATMENT**

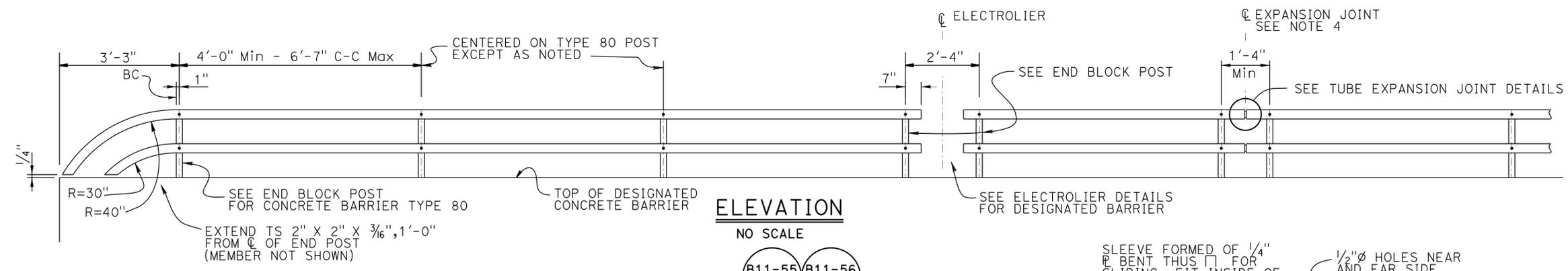
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02	Tri	299	12.3/12.9	111	149

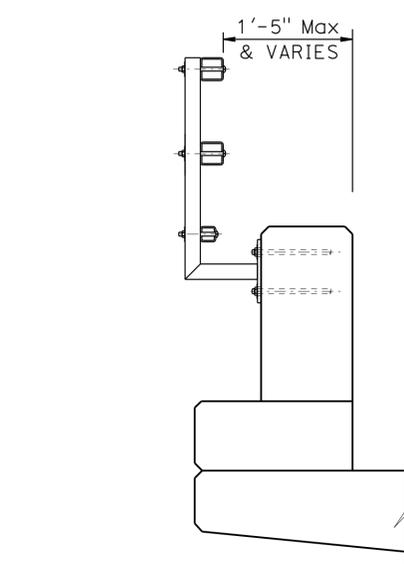
REGISTERED CIVIL ENGINEER	DATE 1-6-14
PLANS APPROVAL DATE 03-26-14	

K. SELVENTHIRAN  
No. C67973  
Exp. 06-30-15  
CIVIL  
STATE OF CALIFORNIA

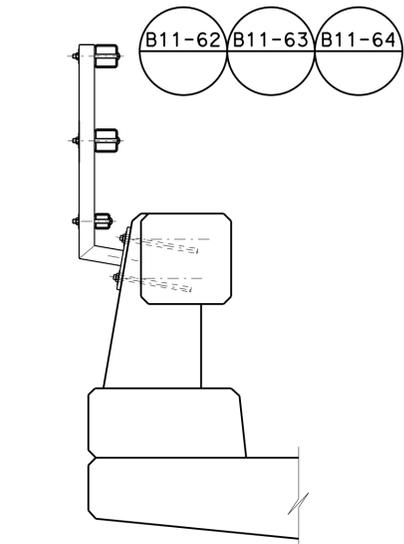
*The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.*



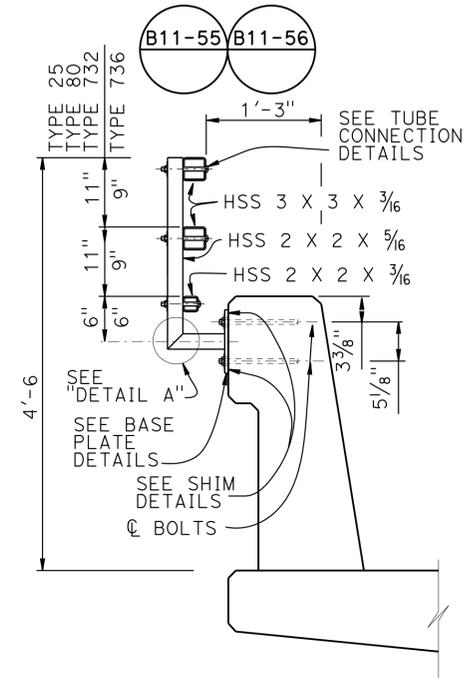
**ELEVATION**  
NO SCALE



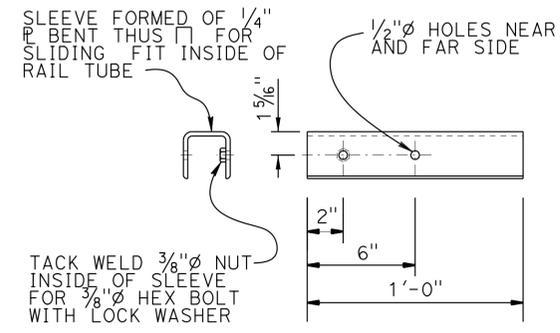
**TYPE 80 END BLOCK POST**  
1" = 1'-0"



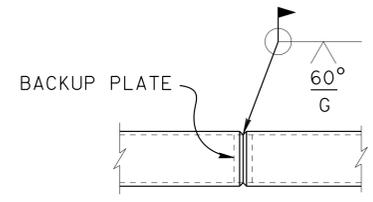
**TYPE 80**  
1" = 1'-0"



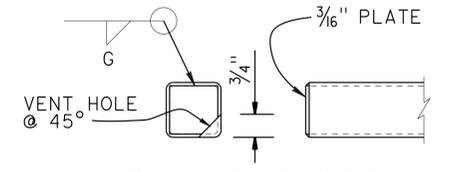
**TYPE 732 OR 736**  
1" = 1'-0"



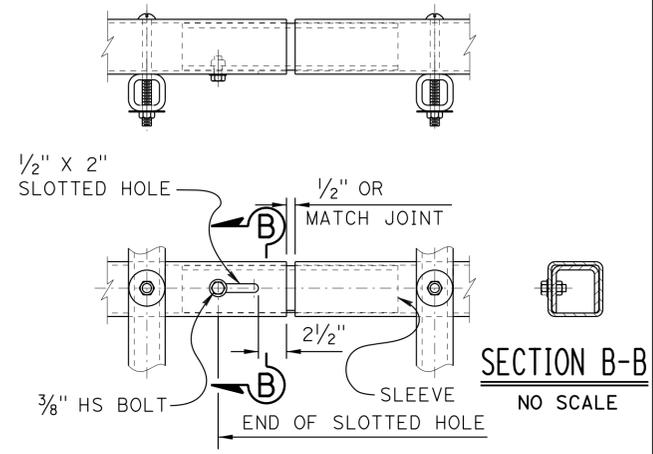
**SLEEVE DETAIL**  
NO SCALE



**WELDED SPLICE DETAIL**  
NO SCALE

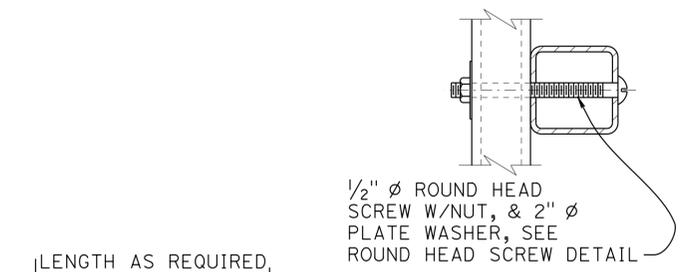


**RAIL CAP DETAIL**  
NO SCALE

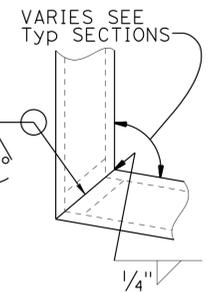


**TUBE EXPANSION JOINT DETAILS**  
NO SCALE

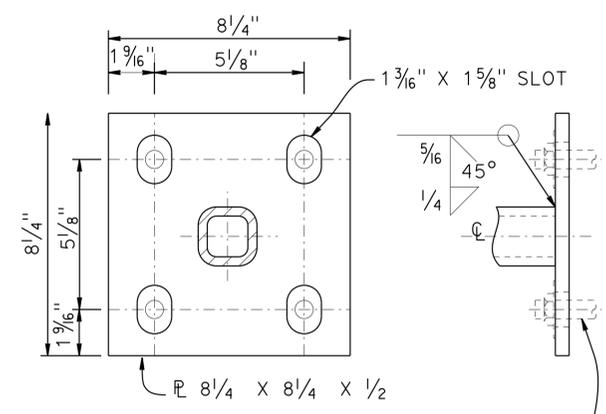
- NOTES:
1. Post shall be normal to railing.
  2. Rail tubes shall be shop bent or fabricated to fit horizontal curve when radius is less than 12".
  3. Tube splices shall be located in the tubes spanning deck or wall joints. Increase joint width in tubes to match expansion joint width and increase sleeve length correspondingly.
  4. Top rail tube shall be continuous over not less than two posts except a short post spacing is permitted near deck or wall joints, electroliers, or other rail discontinuities as noted.
  5. See Project Plans for limits of tubular hand railing.



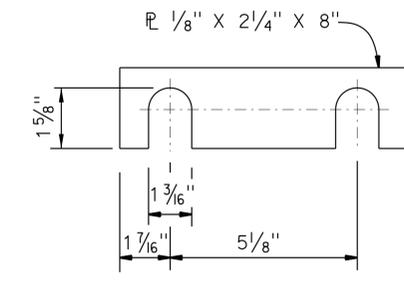
**TUBE CONNECTION DETAIL**  
NO SCALE



**DETAIL A**  
NO SCALE



**BASE PLATE DETAIL**  
NO SCALE



**SHIM DETAILS**  
NO SCALE

**ROUND HEAD SCREW DETAIL**  
NO SCALE

STANDARD DRAWING		STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION		DIVISION OF ENGINEERING SERVICES		BRIDGE NO. 05-0091 POST MILE 12.53		COLLINS BAR SIDEHILL VIADUCT No. 1 CONCRETE BARRIER TYPE 80, 732 & 736 TUBULAR BICYCLE RAILING DETAILS	
FILE NO. <b>xs16-035</b>	APPROVAL DATE <u>March 2012</u>	UNIT: 3577 PROJECT NUMBER & PHASE: 0200020151		CONTRACT NO.: 02-3E7904		DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES	SHEET 17 OF 26

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	299	12.3/12.9	112	149

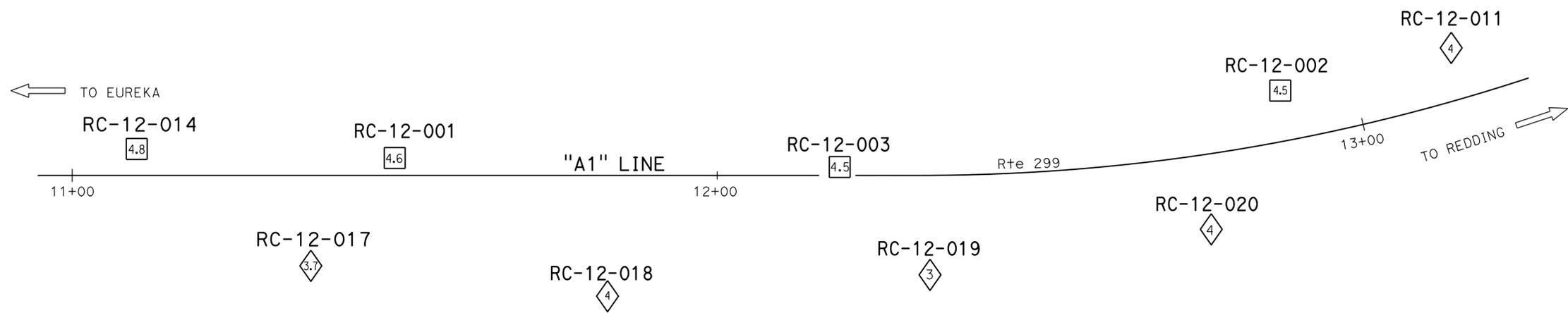
CERTIFIED ENGINEERING GEOLOGIST *Reid Buell* DATE 6-6-13  
 PLANS APPROVAL DATE 03-26-14  
 No. 1481  
 Exp. 4-30-15  
 CERTIFIED ENGINEERING GEOLOGIST  
 STATE OF CALIFORNIA

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This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).  
 See 2010 Standard Plans A10F and A10G for Soil Legend, and A10H for Rock Legend.

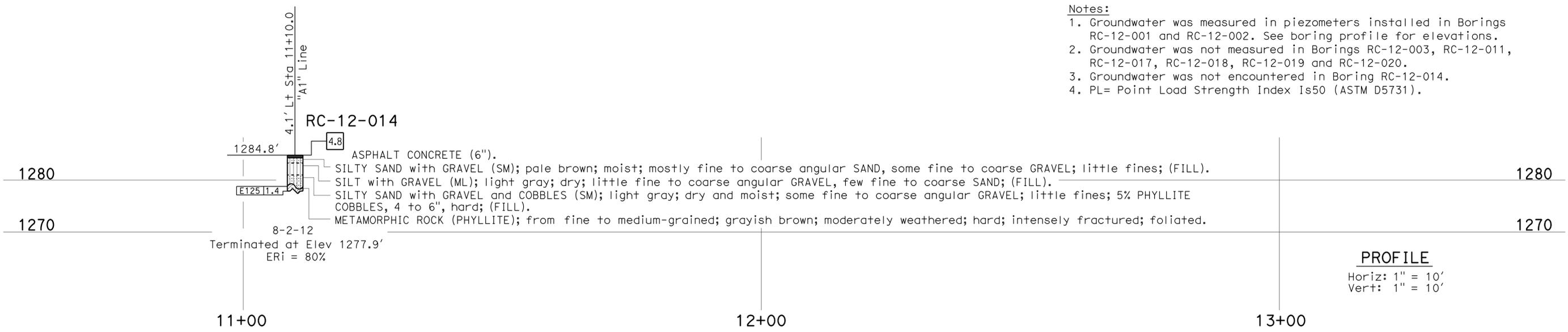
**BENCH MARK**

CM 1250  
 Fdn capped rebar  
 59.13 Ft Lt "A1" Line, Route 299  
 Sta 9+12.64  
 N 2,178,107.66  
 E 6,156,646.28  
 Elev = 1298.22  
 NAVD 88



**PLAN**  
1" = 10'

- Notes:**
1. Groundwater was measured in piezometers installed in Borings RC-12-001 and RC-12-002. See boring profile for elevations.
  2. Groundwater was not measured in Borings RC-12-003, RC-12-011, RC-12-017, RC-12-018, RC-12-019 and RC-12-020.
  3. Groundwater was not encountered in Boring RC-12-014.
  4. PL= Point Load Strength Index Is50 (ASTM D5731).



**PROFILE**  
Horiz: 1" = 10'  
Vert: 1" = 10'

<b>ENGINEERING SERVICES</b>		<b>MATERIALS AND GEOTECHNICAL SERVICES</b>		<b>STATE OF CALIFORNIA</b>		<b>DIVISION OF ENGINEERING SERVICES</b>		<b>BRIDGE NO.</b>		<b>COLLINS BAR SIDEHILL VIADUCT NO. 1</b>	
FUNCTIONAL SUPERVISOR		DRAWN BY: F. Nguyen		DEPARTMENT OF TRANSPORTATION		STRUCTURE DESIGN		05-0091		<b>LOG OF TEST BORINGS 1 OF 9</b>	
NAME: Roy Bibbens		CHECKED BY: L. Paredes-Mejia		FIELD INVESTIGATION BY: J. Thorne		DESIGN BRANCH		12.3-12.7			
06S CIVIL LOG OF TEST BORINGS SHEET		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		UNIT: 3643		PROJECT NUMBER & PHASE: 02000201511		CONTRACT NO.: 02-3E7901		REVISION DATES	
		0 1 2 3		DISREGARD PRINTS BEARING EARLIER REVISION DATES		03-06-13		05-06-13		06-06-13	
										SHEET 18 OF 26	

USERNAME => s123119 DATE PLOTTED => 28-MAY-2014 TIME PLOTTED => 15:09







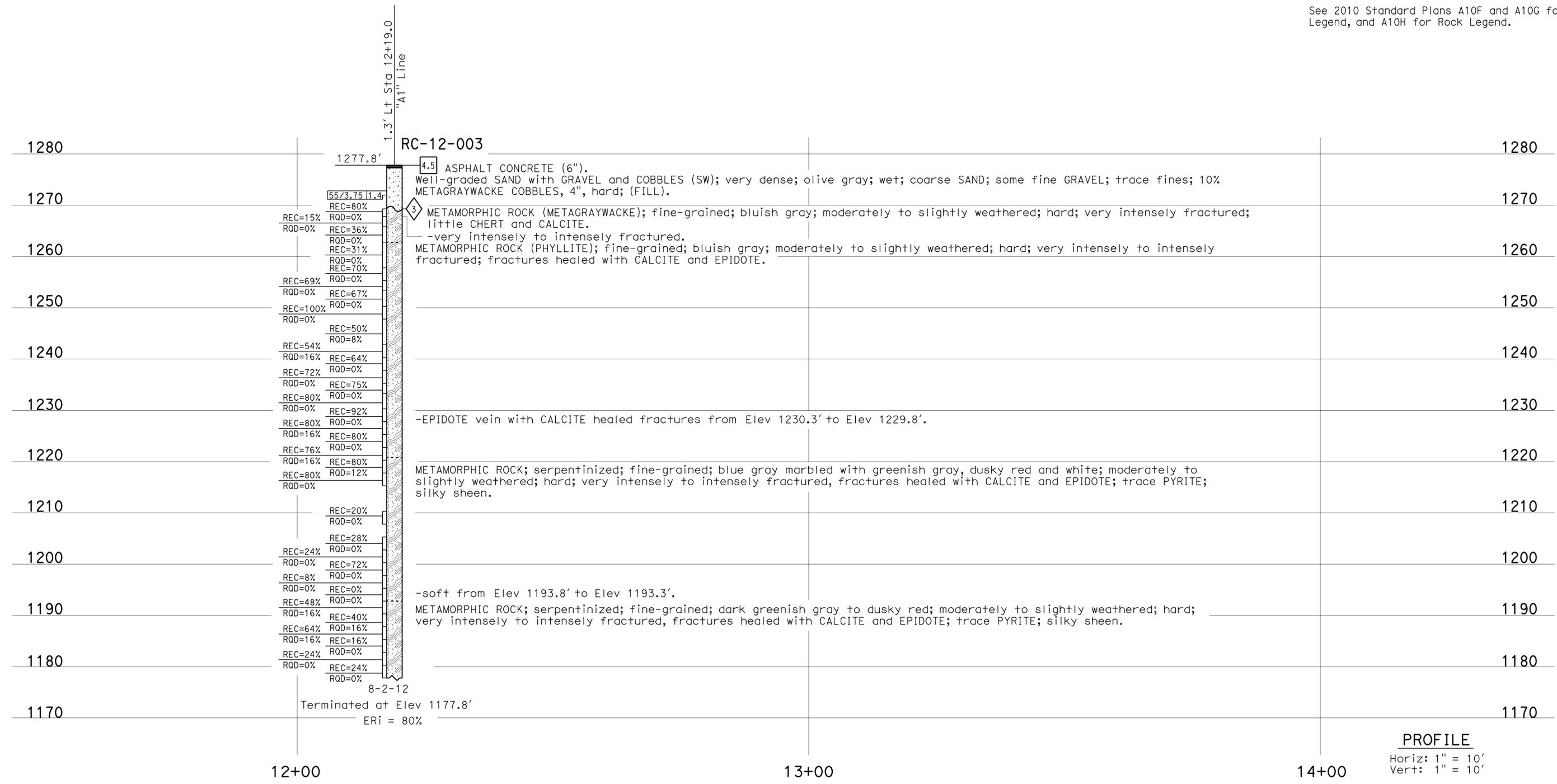
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	299	12.3/12.9	116	149
			6-6-13	DATE	
			03-26-14	PLANS APPROVAL DATE	

Reid Buell  
 CERTIFIED ENGINEERING GEOLOGIST  
 No. 1481  
 Exp. 4-30-15  
 PROFESSIONAL GEOLOGIST  
 STATE OF CALIFORNIA

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FOR PLAN VIEW, SEE  
 "LOG OF TEST BORINGS 1 OF 9"

This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).  
 See 2010 Standard Plans A10F and A10G for Soil Legend, and A10H for Rock Legend.



<b>ENGINEERING SERVICES</b>		<b>MATERIALS AND GEOTECHNICAL SERVICES</b>		<b>STATE OF CALIFORNIA</b>		<b>DIVISION OF ENGINEERING SERVICES</b>		<b>BRIDGE NO.</b>		<b>COLLINS BAR SIDEHILL VIADUCT NO. 1</b>	
FUNCTIONAL SUPERVISOR		DRAWN BY: F. Nguyen		DEPARTMENT OF TRANSPORTATION		STRUCTURE DESIGN		05-0091		<b>LOG OF TEST BORINGS 5 OF 9</b>	
NAME: R. Bibbens		CHECKED BY: L. Paredes-Mejia		FIELD INVESTIGATION BY:		DESIGN BRANCH		POST MILE			
				J. Thorne, J. Kaump.				12.3-12.7			
O&S CIVIL LOG OF TEST BORINGS SHEET				ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				UNIT: 3643		REVISION DATES	
				0 1 2 3				PROJECT NUMBER & PHASE: 02000201511		SHEET OF	
								CONTRACT NO.: 02-3E7901		22 26	
								DISREGARD PRINTS BEARING EARLIER REVISION DATES		03-07-13 06-06-13 05-17-15	

FILE => 05-0091-y-1+b05.dgn

USERNAME => s123119 DATE PLOTTED => 28-MAY-2014 TIME PLOTTED => 15:09





DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	299	12.3/12.9	119	149

CERTIFIED ENGINEERING GEOLOGIST DATE 6-6-13  
 REID BUELL  
 No. 1481  
 Exp. 4-30-15  
 CERTIFIED ENGINEERING GEOLOGIST  
 STATE OF CALIFORNIA  
 PLANS APPROVAL DATE 03-26-14

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FOR PLAN VIEW, SEE  
"LOG OF TEST BORINGS 1 OF 9"



PROFILE  
 Horiz: 1" = 20'  
 Vert: 1" = 10'

ENGINEERING SERVICES		MATERIALS AND GEOTECHNICAL SERVICES		STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION		DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH		BRIDGE NO. 05-0091 POST MILE 12.3-12.7		COLLINS BAR SIDEHILL VIADUCT NO. 1 LOG OF TEST BORINGS 8 OF 9	
FUNCTIONAL SUPERVISOR NAME: R. Bibbens		DRAWN BY: F. Nguyen CHECKED BY: L. Paredes-Mejia		FIELD INVESTIGATION BY: A. Barrie		UNIT: 3643 PROJECT NUMBER & PHASE: 02000201511		CONTRACT NO.: 02-3E7901		DISREGARD PRINTS BEARING EARLIER REVISION DATES	
OGS CIVIL LOG OF TEST BORINGS SHEET		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		0 1 2 3		REVISION DATES		SHEET 25 OF 26		DATE PLOTTED => 15:09 USER NAME => s123119 DATE PLOTTED => 28-MAY-2014	



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	299	12.3/12.9	121	149
			1-6-14		
REGISTERED CIVIL ENGINEER			DATE		
3-26-14			PLANS APPROVAL DATE		
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**Notes:**

- Existing rubble barrier and wall to be removed to an elevation 3' below bottom of new deck slab. The top of remaining wall to be leveled with a smooth mortar pad not to exceed 4" in thickness. Removal of large rocks and replacement with smaller ones may be required to achieve this.
- Prepare concrete bridge deck surface and place 1" thick polyester concrete overlay.
- For "INDEX TO PLANS", "STANDARD PLANS", "PILE DATA TABLE" AND "GENERAL NOTES", see "INDEX TO PLANS" sheet.
- Inside face of concrete barrier to receive concrete surface texture treatment.
- Prepare and stain all columns, exterior face of bents and end of deck slabs.
- Paint tubular bicycle railing.
- Paint bridge name "COLLINS BAR SIDEHILL VIADUCT No. 2".
- Paint bridge no. "05-0092".
- Concrete Barrier Type 736B Mod, see "Road Plans".
- Piles and columns are constructed in Stage 2 and Stage 3, see "Road Plans" for stage construction and traffic openings.

- Conflicting portion of wall to be removed
- Indicates existing
- Structure excavation

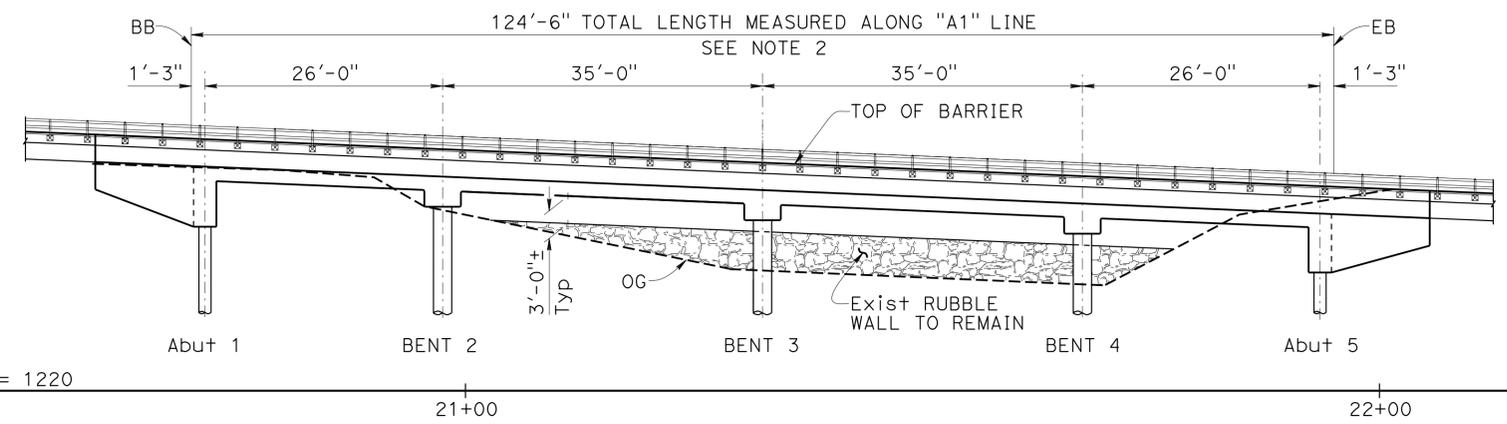
21+71.50 BVC  
Elev 1228.96

23+71.50 EVC  
Elev 1218.49

-5.32%

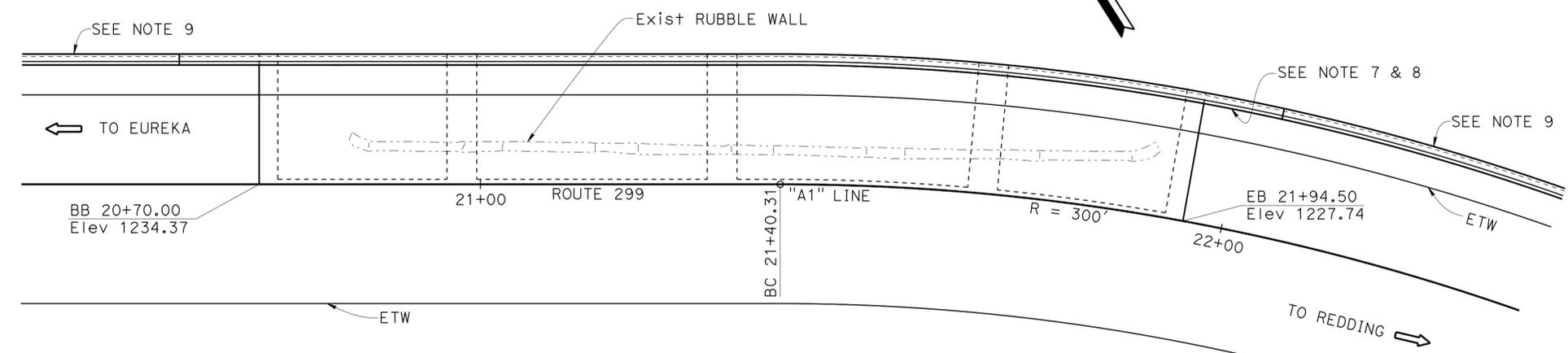
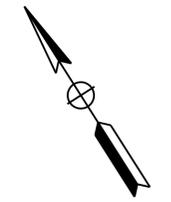
-5.15%

**PROFILE GRADE**  
NO SCALE



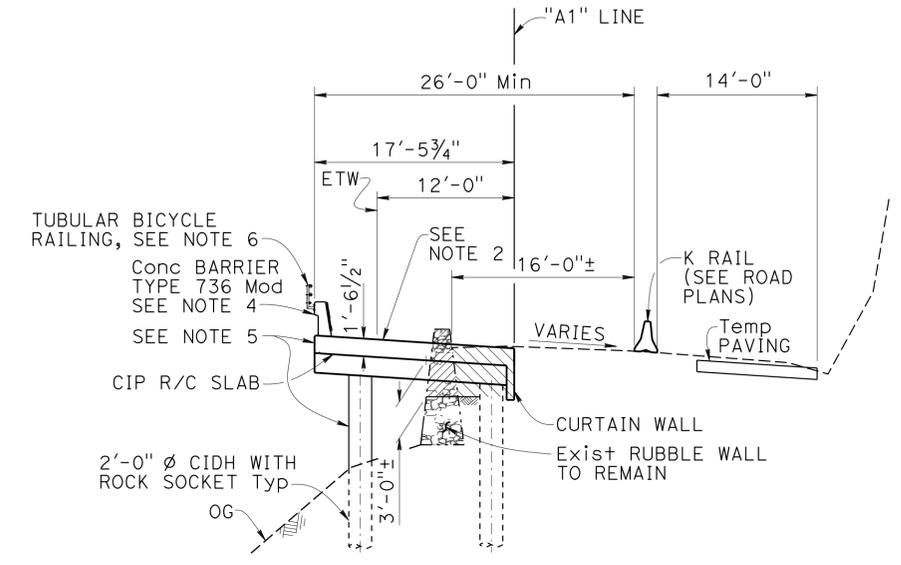
DATUMN Elev = 1220

**MIRRORED ELEVATION**  
1" = 10'-0"



**"A1" LINE CURVE DATA**  
R = 300.00'  
Δ = 50°08'07"  
T = 140.32'  
L = 262.51'

**PLAN**  
1" = 10'-0"



**TYPICAL SECTION**  
1/8" = 1'-0"  
STAGE 4 SHOWN, SEE NOTE 10

QUANTITIES	
RECONSTRUCT RUBBLE WALL	LUMP SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	1,992 SQFT
FURNISH POLYESTER CONCRETE OVERLAY	216 CF
PLACE POLYESTER CONCRETE OVERLAY	1,992 SQFT
STRUCTURE EXCAVATION (BRIDGE)	205 CY
STRUCTURE BACKFILL (BRIDGE)	33 CY
24" CAST-IN-DRILLED-HOLE CONCRETE PILING (ROCK SOCKET)	17 LF
16" CAST-IN-DRILLED-HOLE CONCRETE PILING (ROCK SOCKET)	55 LF
24" CAST-IN-DRILLED-HOLE CONCRETE PILING (ROCK SOCKET)	121 LF
STRUCTURAL CONCRETE, BRIDGE	166 CY
BAR REINFORCING STEEL (BRIDGE)	26,055 LB
BAR REINFORCING STEEL (EPOXY COATED)(BRIDGE)	13,789 LB
PREPARE AND STAIN CONCRETE	732 SQFT
MISCELLANEOUS METAL (BRIDGE)	670 LB
TUBULAR BICYCLE RAILING	146 LF
CONCRETE BARRIER (TYPE 736 MODIFIED)	146 LF

DESIGN	BY K. SELVENTHIRAN	CHECKED G. SLOCUM	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE
DETAILS	BY C. FIGUERRES	CHECKED G. SLOCUM	LAYOUT	BY K. SELVENTHIRAN
QUANTITIES	BY K. SELVENTHIRAN	CHECKED E. MONTEVIRGEN	SPECIFICATIONS	BY D. Klein

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 2

BRIDGE NO. 05-0092  
POST MILE 12.71

**COLLINS BAR SIDEHILL VIADUCT No. 2**  
**GENERAL PLAN**

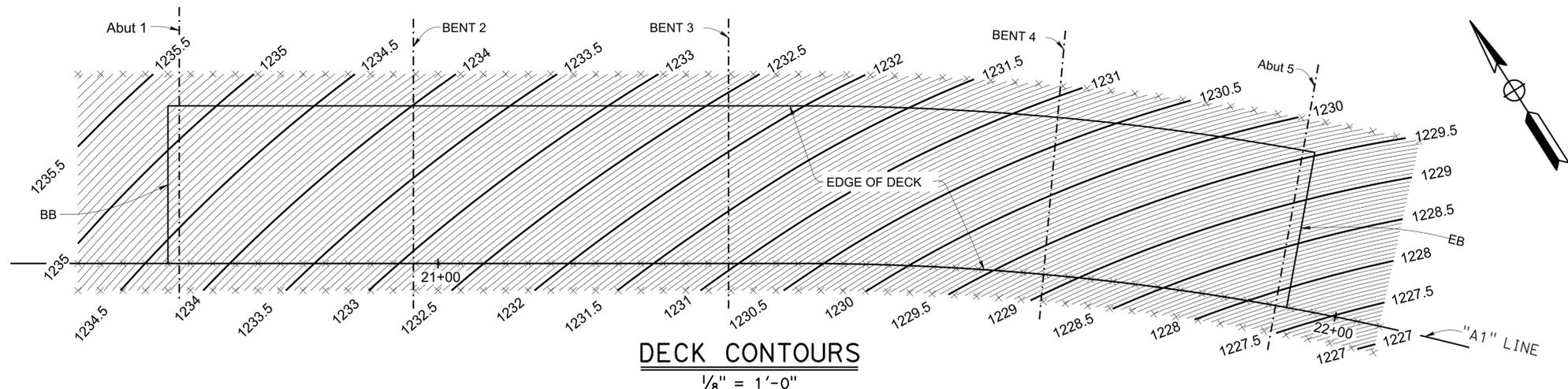
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	299	12.3/12.9	122	149

REGISTERED CIVIL ENGINEER DATE 1-6-14

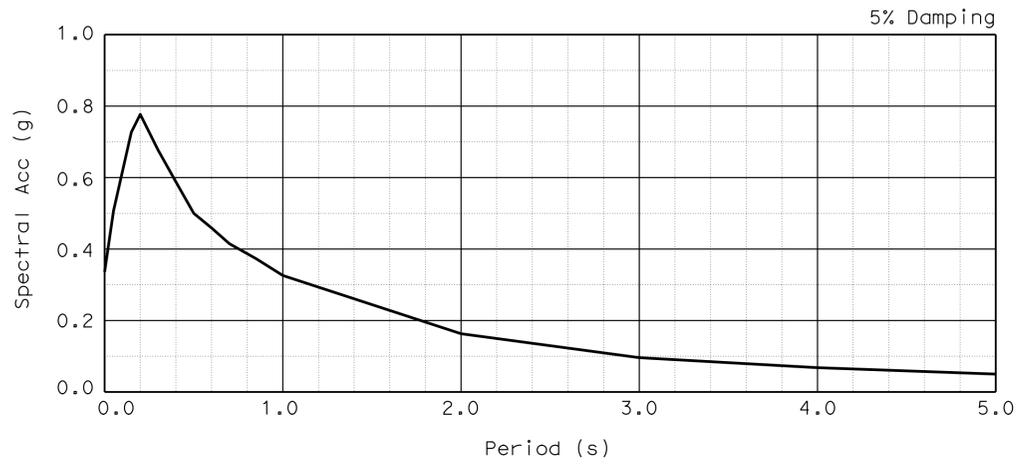
3-26-14 PLANS APPROVAL DATE

K. SELVENTHIRAN No. C67973 Exp. 06-30-15 CIVIL STATE OF CALIFORNIA

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- NOTES:
1. Contours do not include camber
  2. Contours shown are top of deck elevations
  3. Contours interval = 0.05 Ft
- × 2.5 Ft Interval measured along station line



**ACCELERATION RESPONSE SPECTRUM**

**GENERAL NOTES  
(LOAD AND RESISTANCE FACTOR DESIGN)**

DESIGN: AASHTO LRFD Bridge Design Specifications, Fourth Edition and the California Amendments preface dated September 2010.

SEISMIC DESIGN: Caltrans Seismic Design Criteria (SDC) Version 1.6, November 2010.

DEAD LOAD: Includes 35 psf for wearing surface.

LIVE LOADING: HL-93 and P-15 Permit Design Load.

SEISMIC LOADING: FAULT: BIG LAGOON-BALD MOUNTAIN I.D.: 9  
SOIL PROFILE: Vs30 = 760 m/s  
MOMENT OF MAGNITUDE: M<sub>max</sub> = 7.5  
PEAK GROUND ACCELERATION: 0.34g

REINFORCED CONCRETE: f<sub>y</sub> = 60 ksi  
f'<sub>c</sub> = 4.0 ksi  
n = 8

**INDEX TO PLANS**

SHEET No.	TITLE
1.	GENERAL PLAN
2.	DECK CONTOURS
3.	FOUNDATION PLAN
4.	ABUTMENTS
5.	BENT 2 DETAILS
6.	BENT 3 & 4 DETAILS
7.	TYPICAL SECTION
8.	TOP & BOTTOM DECK REINFORCEMENT
9.	PIPE PIN DETAILS
10.	ARCHITECTURAL TREATMENT
11.	TUBULAR BICYCLE RAILING DETAILS
12.	LOG OF TEST BORINGS 1 OF 5
13.	LOG OF TEST BORINGS 2 OF 5
14.	LOG OF TEST BORINGS 3 OF 5
15.	LOG OF TEST BORINGS 4 OF 5
16.	LOG OF TEST BORINGS 5 OF 5

**PILE DATA TABLE**

SUPPORT LOCATION	PILE TYPE	NOMINAL RESISTANCE		CUT-OFF ELEVATION	ESTIMATE TOP OF BEDROCK ELEVATION	PILE		
		COMPRESSION	TENSION			DESIGN TIP ELEVATION	SPECIFIED TIP ELEVATION	
		kips				ft		
Abut 1	LEFT	16"Ø CIDH Conc PILING WITH 16"Ø ROCK SOCKET	280	0	1228.3	1232.0	1213.0 (a), 1220.0 (b)	1213.0 (a)
	RIGHT	16"Ø CIDH Conc PILING WITH 16"Ø ROCK SOCKET	280	0	1228.3	1232.0	1217.0 (a), 1220.0 (b)	1217.0 (a)
BENT 2	LEFT	2'-0" Ø CIDH Conc PILING WITH 2'-0" Ø ROCK SOCKET	550	0	1227.5	1227.5	1204.0 (a), 1202.0 (b)	1202.0 (b)
	RIGHT	2'-0" Ø CIDH Conc PILING WITH 2'-0" Ø ROCK SOCKET	410	0	1230.0	1230.0	1213.0 (a), 1215.0 (b)	1213.0 (a)
BENT 3	LEFT	2'-0" Ø CIDH Conc PILING WITH 2'-0" Ø ROCK SOCKET	590	0	1220.0	1220.0	1190.0 (a), 1194.0 (b)	1190.0 (a)
	RIGHT	2'-0" Ø CIDH Conc PILING WITH 2'-0" Ø ROCK SOCKET	420	0	1228.2	1216.0	1206.0 (a), 1207.0 (b)	1206.0 (a)
BENT 4	LEFT	2'-0" Ø CIDH Conc PILING WITH 2'-0" Ø ROCK SOCKET	570	0	1218.0	1218.0	1190.0 (a), 1193.0 (b)	1190.0 (a)
	RIGHT	2'-0" Ø CIDH Conc PILING WITH 2'-0" Ø ROCK SOCKET	400	0	1226.3	1222.0	1212.0 (a), 1214.0 (b)	1212.0 (a)
Abut 5	LEFT	16"Ø CIDH Conc PILING WITH 16"Ø ROCK SOCKET	280	0	1222.7	1227.0	1206.0 (a), 1213.0 (b)	1206.0 (a)
	RIGHT	16"Ø CIDH Conc PILING WITH 16"Ø ROCK SOCKET	280	0	1221.9	1227.0	1211.0 (a), 1213.0 (b)	1211.0 (a)

- NOTES:
1. DESIGN TIP ELEVATIONS ARE CONTROLLED BY: (a) COMPRESSION, AND (b) LATERAL LOAD, RESPECTIVELY.

**STANDARD PLANS 2010**

- A10A ABBREVIATIONS (SHEET 1 OF 2)
  - RSP A10B ABBREVIATIONS (SHEET 2 OF 2)
  - A10C LINE AND SYMBOLS
  - A10D LINE AND SYMBOLS
  - A62C LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL - BRIDGE
  - B0-1 BRIDGE DETAILS
  - B0-3 BRIDGE DETAILS
  - B0-13 BRIDGE DETAILS
  - B2-3 16" AND 24" CIDH CONCRETE PILE
  - RSP B11-56 CONCRETE BARRIER TYPE 732
- STANDARD PLAN SHEET No. (Symbol)
- DETAIL No. (Symbol)

DESIGN BY K. SELVENTHIRAN	CHECKED G. SLOCUM	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN	BRIDGE NO. 05-0092	COLLINS BAR SIDEHILL VIADUCT No. 2 DECK CONTOURS
DETAILS BY C. FIGUERRES	CHECKED G. SLOCUM		DESIGN BRANCH 2	POST MILE 12.71	
QUANTITIES BY K. SELVENTHIRAN	CHECKED E. MONTEVIRGEN		UNIT: 3577 PROJECT NUMBER & PHASE: 0200020151	CONTRACT NO.: 02-3E7904	

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

REVISION DATES: 11-28-12, 3-26-13, 2-5-14

SHEET 2 OF 16

**CURVE DATA**

No.	R	Δ	T	L
(A)	300.00	50°08'07"	140.32	262.51

**LEGEND:**

- CIDH
- ⊙ VERTICAL PILE

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	299	12.3/12.9	123	149

REGISTERED CIVIL ENGINEER *[Signature]* DATE 1-6-14

PLANS APPROVAL DATE 3-26-14

**K. SELVENTHIRAN**  
No. C7973  
Exp. 06-30-15  
CIVIL  
STATE OF CALIFORNIA

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**SURVEY CONTROL**  
 CM 1250 (NOT SHOWN ON PLAN)  
 Fnd CAPPED REBAR  
 59.13 Ft Lt "A1" LINE, ROUTE 299  
 Sta 9+12.64  
 N 2,178,107.66  
 E 6,156,646.28  
 Elev =1298.22  
 CM 1263 (NOT SHOWN ON PLAN)  
 Fnd CAPPED REBAR  
 76.14 Ft Lt "A1" LINE, ROUTE 299  
 Sta 18+35.02  
 N 2,177,331.44  
 E 6,156,885.09  
 Elev =1246.03

<b>PRELIMINARY INVESTIGATION SECTION</b>				DESIGN BY K. SELVENTHIRAN	CHECKED G. SLOCUM	<b>STATE OF CALIFORNIA</b> <b>DEPARTMENT OF TRANSPORTATION</b>	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 2</b>	BRIDGE NO. 05-0092	<b>COLLINS BAR SIDEHILL VIADUCT No. 2</b> <b>FOUNDATION PLAN</b>
SCALE 1"=10'	VERT. DATUM NAVD88	PHOTOGRAMMETRY AS OF: X	DETAILS BY C. FIGUERRES	CHECKED G. SLOCUM	POST MILE 12.71				
ALIGNMENT TIES Dist. Traverse Sheet	DRAFTED BY SHARON ZHENG 10/2012	CHECKED BY JOHN BORDEN 10/2012	QUANTITIES BY K. SELVENTHIRAN	CHECKED E. MONTEVIRGEN					

STRUCTURES FOUNDATION PLAN SHEET (ENGLISH) (REV. 09-01-10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

UNIT: 3577 PROJECT NUMBER & PHASE: 0200020151 CONTRACT NO.: 02-3E7904

DISREGARD PRINTS BEARING EARLIER REVISION DATES

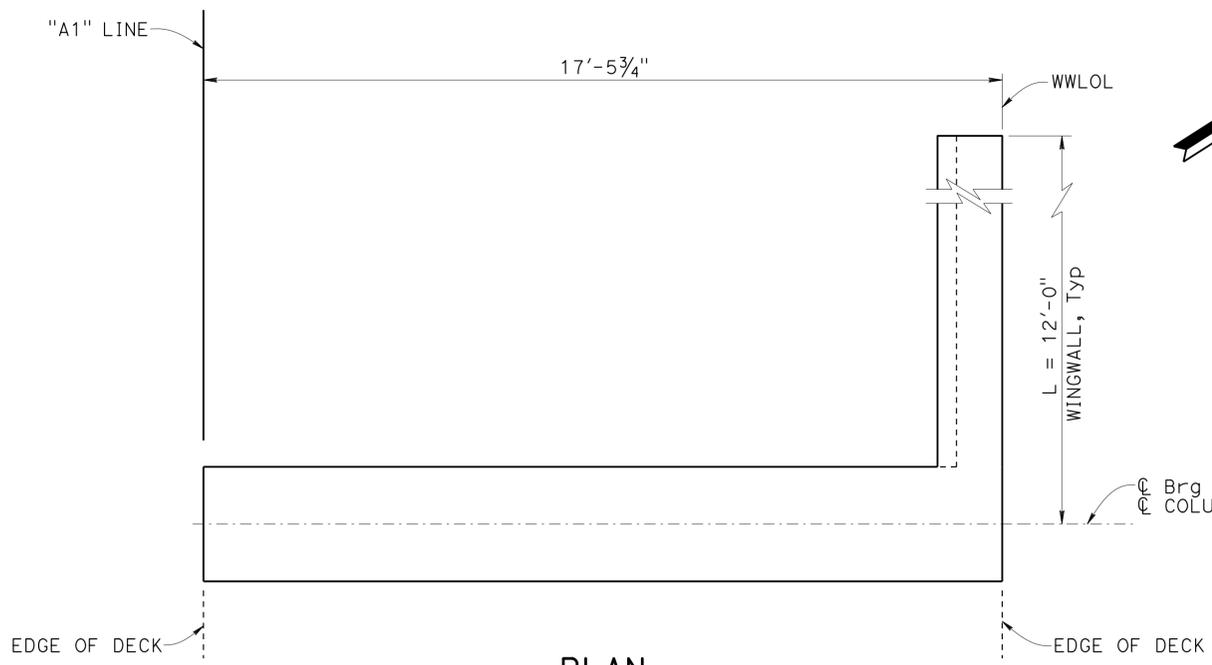
REVISION DATES	SHEET	OF
11/11/12 12/05/12 1/16/13	3	16

FILE => 05-0092-e-fp.dgn

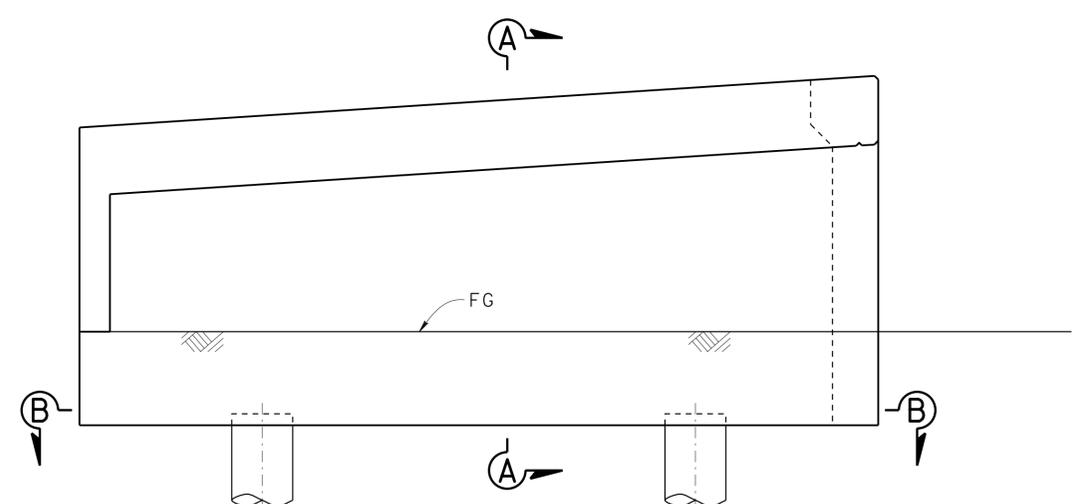
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	299	12.3/12.9	124	149
			1-6-14	DATE	
REGISTERED CIVIL ENGINEER			DATE		
			3-26-14	PLANS APPROVAL DATE	
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



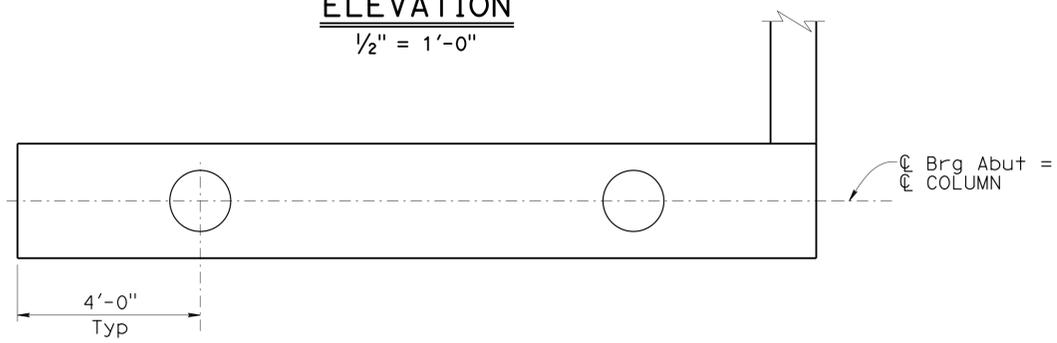
- NOTES:
1. For Deck Reinforcement, see "TOP & BOTTOM DECK REINFORCEMENT" sheet.
  2. Abutment 1 shown, Abutment 5 similar.
  3. Backfill behind abutments shall not be placed until superstructure is completed.



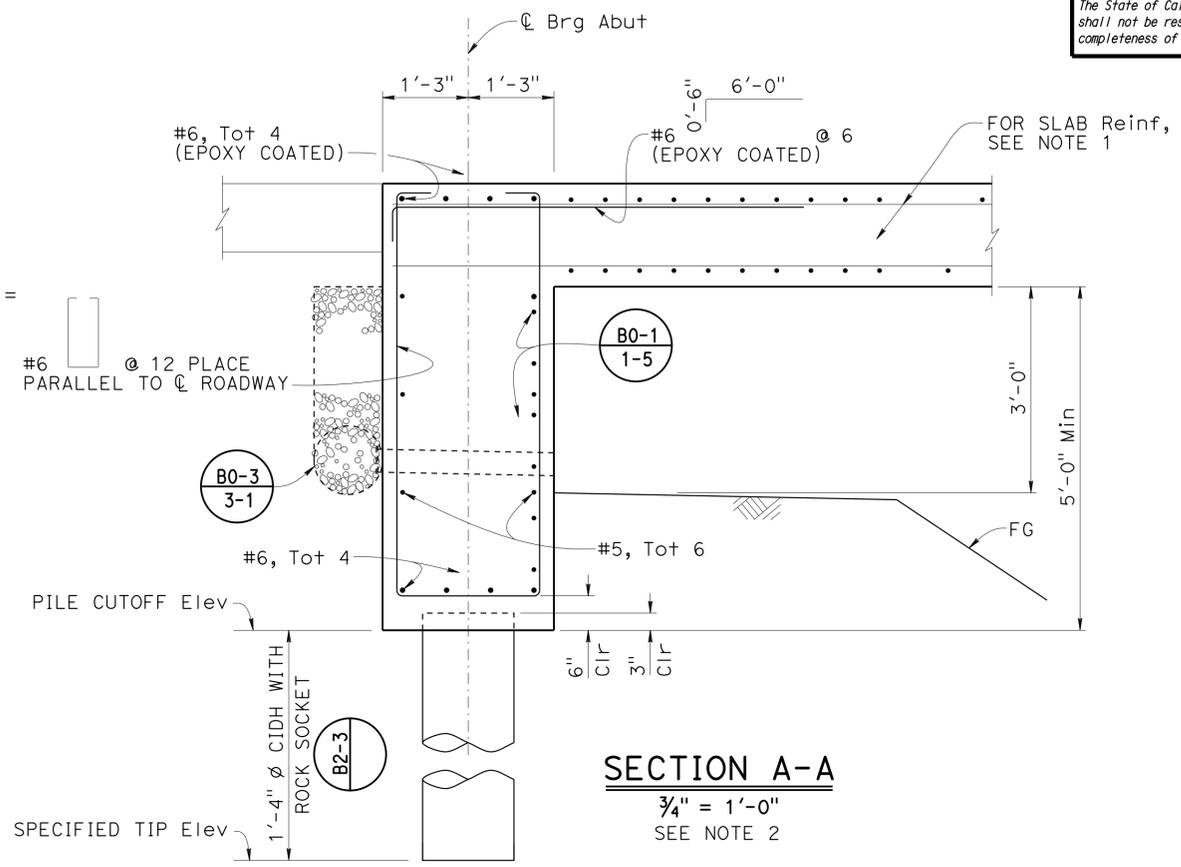
**PLAN**  
1/2" = 1'-0"



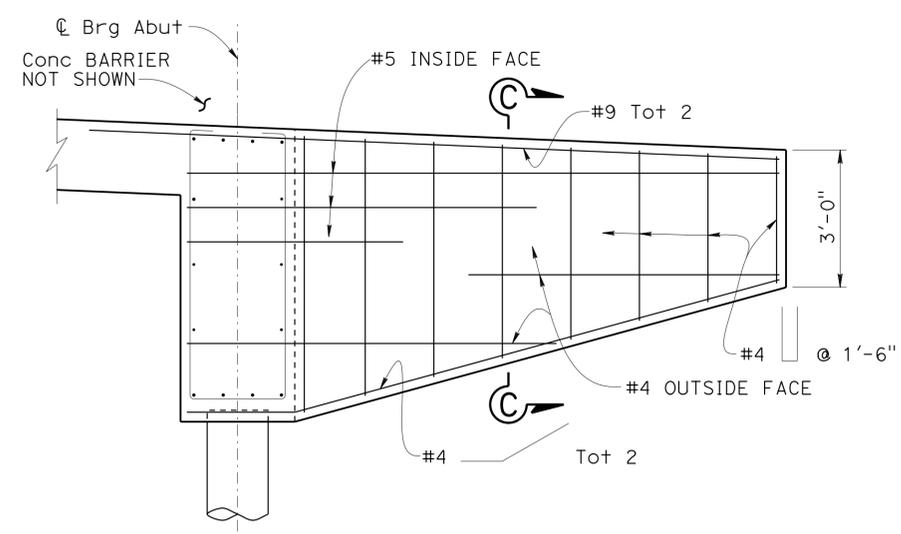
**ELEVATION**  
1/2" = 1'-0"



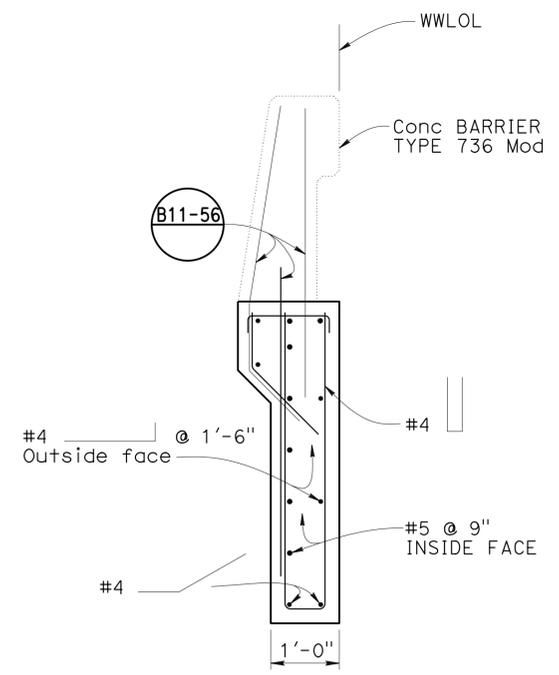
**SECTION B-B**  
1/2" = 1'-0"



**SECTION A-A**  
3/4" = 1'-0"  
SEE NOTE 2



**WINGWALL ELEVATION**  
1/2" = 1'-0"



**SECTION C-C**  
3/4" = 1'-0"

DESIGN	BY K. SELVENTHIRAN	CHECKED G. SLOCUM
DETAILS	BY C. FIGUERRES	CHECKED G. SLOCUM
QUANTITIES	BY K. SELVENTHIRAN	CHECKED E. MONTEVIRGEN

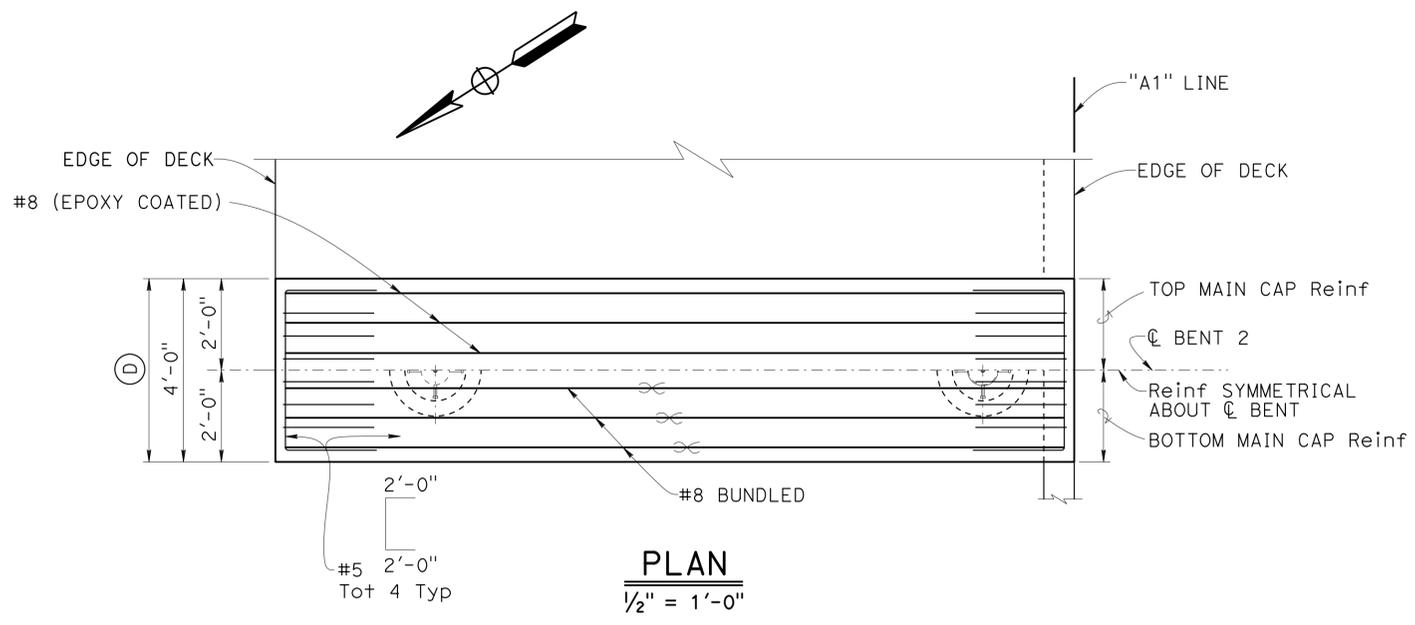
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 2

BRIDGE NO.	05-0092
POST MILE	12.71

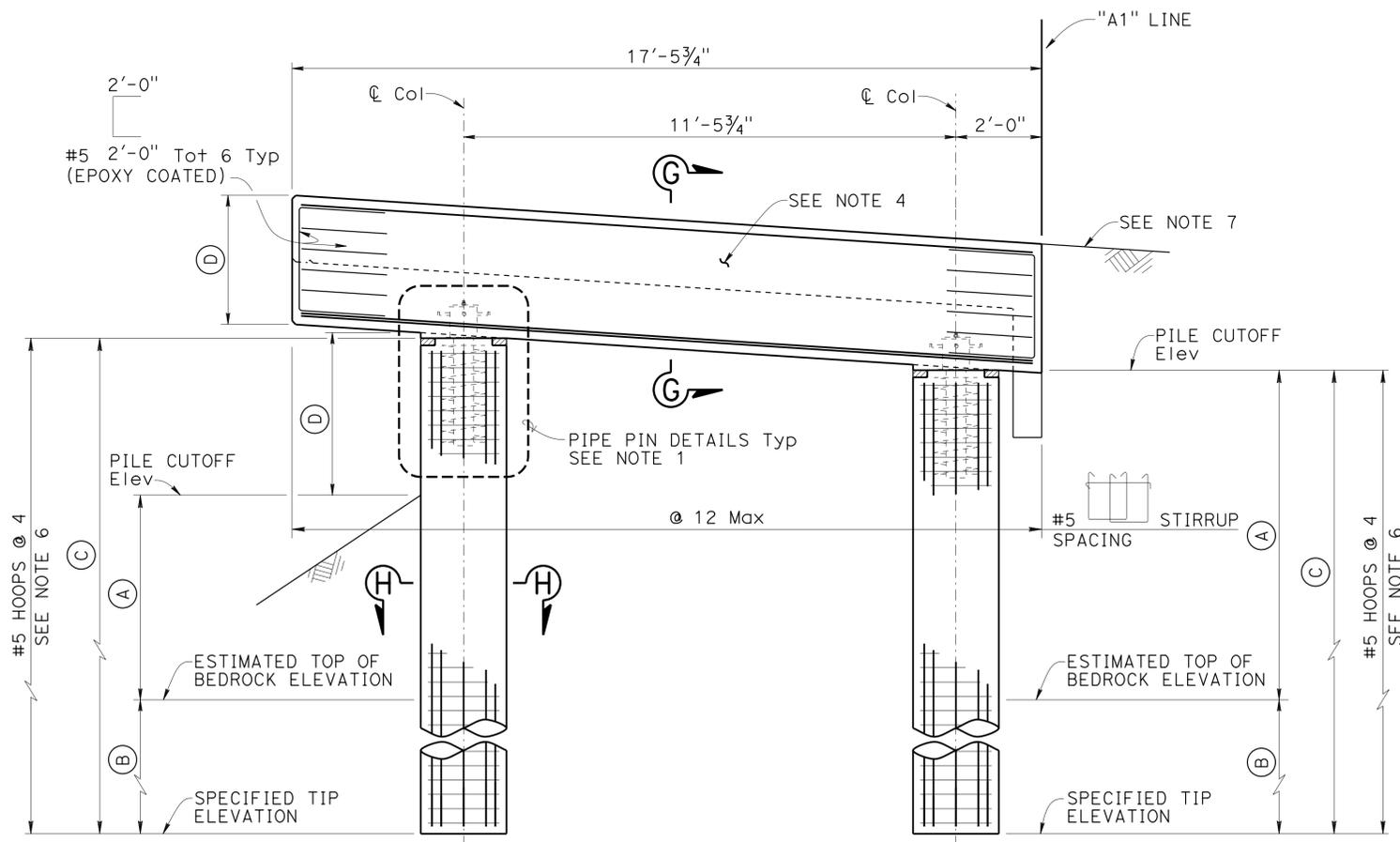
**COLLINS BAR SIDEHILL VIADUCT No. 2**  
**ABUTMENTS**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	299	12.3/12.9	125	149
			1-6-14	DATE	
REGISTERED CIVIL ENGINEER			K. SELVENTHIRAN		
			No. C67973		
PLANS APPROVAL DATE			Exp. 06-30-15		
3-26-14			CIVIL		
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					

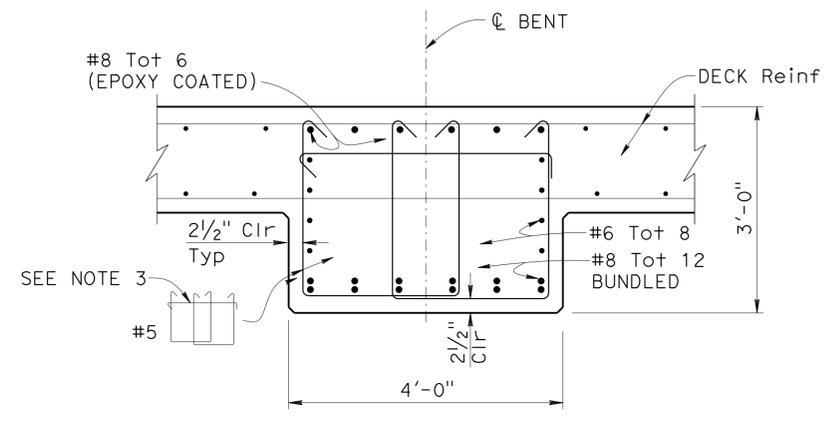


**PLAN**  
1/2" = 1'-0"

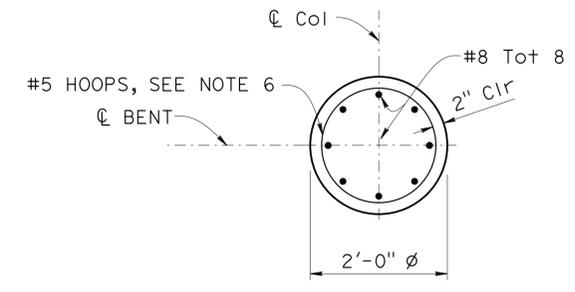
- NOTES:
1. For "PIPE PIN DETAILS", see "PIPE PIN DETAILS" sheet.
  2. Splices not permitted in main cap bars except as shown.
  3. Alternate 135° hooks for ties.
  4. Deck slab reinforcement not shown for clarity.
  5. For pile cutoff elevation, estimated top of bedrock elevation and specified tip elevation, see "PILE DATA TABLE" on "DECK CONTOURS" sheet.
  6. All hoops shall be ultimate butt spliced continuous.
  7. For new roadway, see "ROAD PLANS".
- (A) Limits of payment for 24" ø CIDH concrete pile.  
(B) Limits of payment for 24" ø CIDH concrete pile (Rock Socket).  
(C) No splices in main reinforcement and spirals.  
(D) Limits of payment for prepare and stain concrete.  
∞ Indicates bundled bars



**ELEVATION**  
1/2" = 1'-0"



**SECTION G-G**  
3/4" = 1'-0"



**TYPICAL BENT COLUMN/CIDH PILE**

**SECTION H-H**  
3/4" = 1'-0"

DESIGN	BY K. SELVENTHIRAN	CHECKED G. SLOCUM
DETAILS	BY C. FIGUERRES	CHECKED G. SLOCUM
QUANTITIES	BY K. SELVENTHIRAN	CHECKED E. MONTEVIRGEN

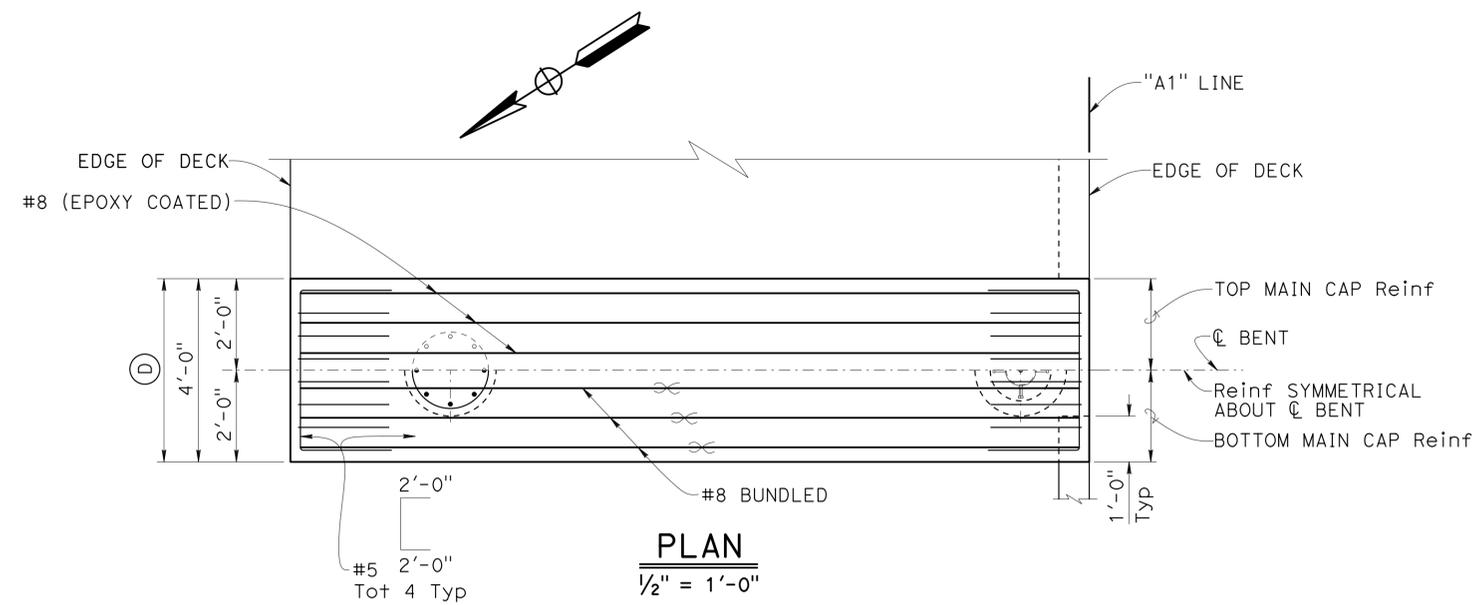
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 2

BRIDGE NO.	05-0092
POST MILE	12.71

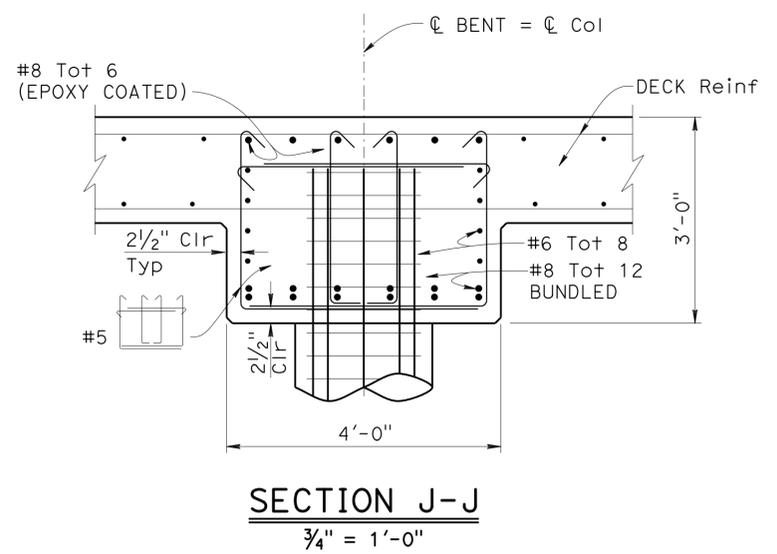
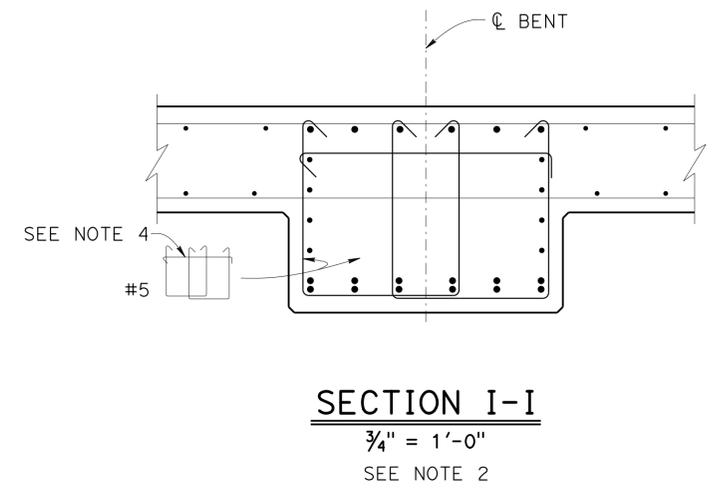
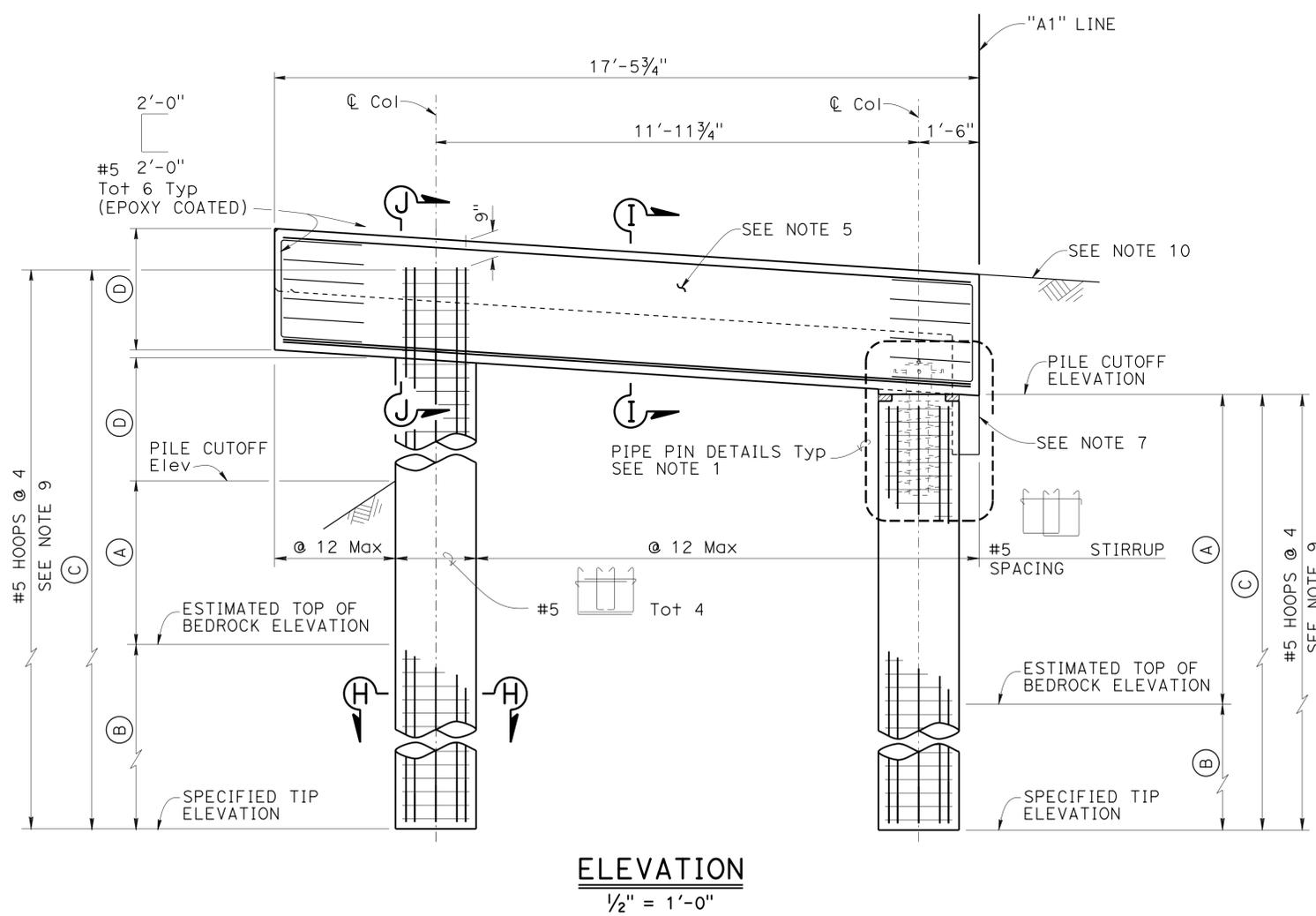
**COLLINS BAR SIDEHILL VIADUCT No. 2**  
**BENT 2 DETAILS**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	299	12.3/12.9	126	149
			1-6-14	DATE	
REGISTERED CIVIL ENGINEER			DATE		
3-26-14			PLANS APPROVAL DATE		
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					



**NOTES:**

- For "PIPE PIN DETAILS", see "PIPE PIN DETAILS" sheet.
  - For details not shown or noted, see "SECTION J-J".
  - Splices not permitted in main cap bars except as shown.
  - Alternate 135° hooks horizontally and vertically.
  - Deck slab reinforcement not shown for clarity.
  - For "SECTION H-H", see "BENT 2 LAYOUT" sheet.
  - Curtain wall discontinues at column.
  - For pile cutoff elevation, estimated top of bedrock elevation and specified tip elevation, see "PILE DATA TABLE" on "DECK CONTOURS" sheet.
  - ALL hoops shall be ultimate butt spliced continuous.
  - For new roadway, see "ROAD PLANS".
- (A) Limits of payment for 24" Ø CIDH concrete pile  
 (B) Limits of payment for 24" Ø CIDH concrete pile (Rock Socket)  
 (C) No splices in main reinforcement and spirals  
 (D) Limits of payment for prepare and stain concrete.  
 ∞ Indicates bundled bars

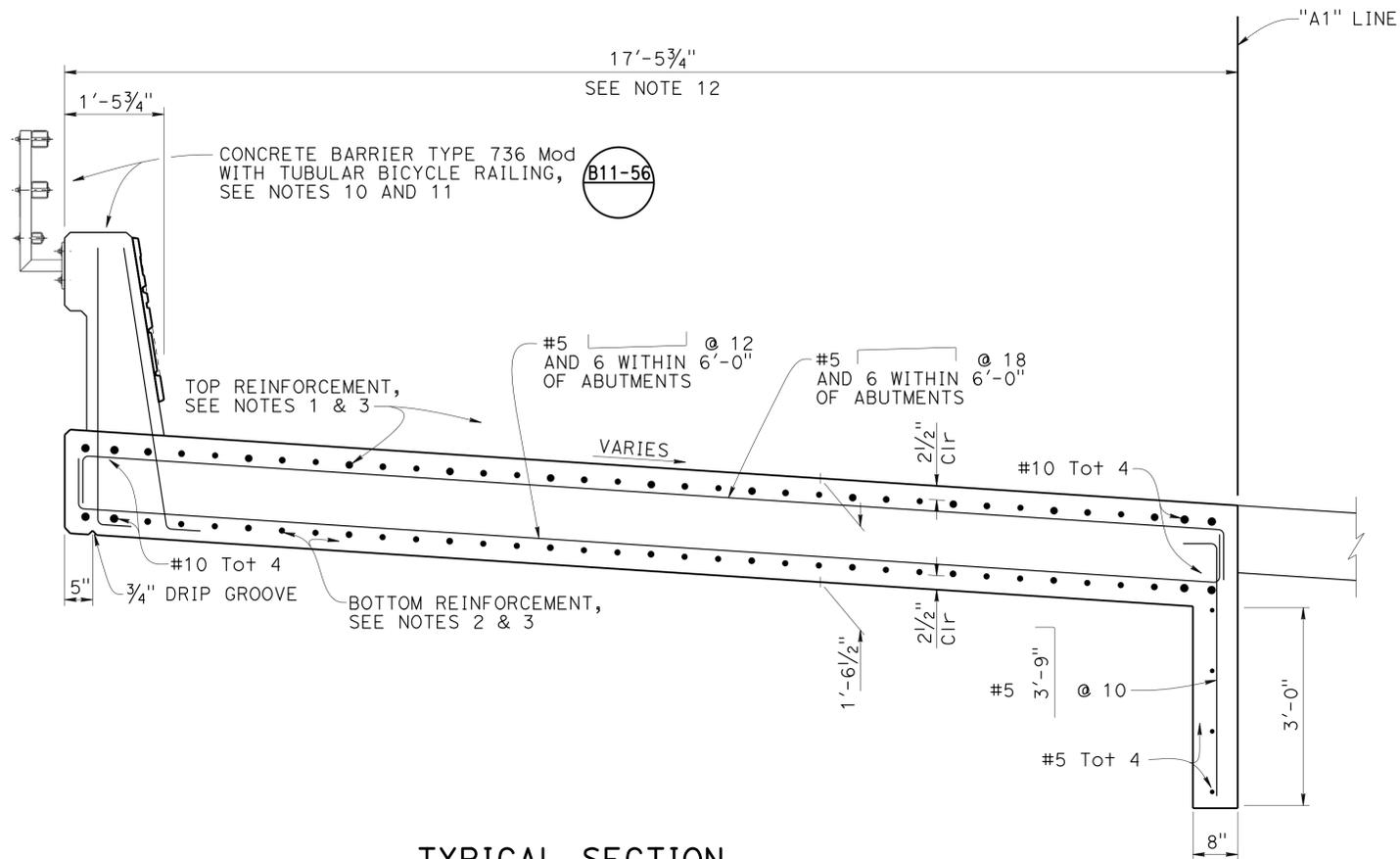


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DESIGN	BY K. SELVENTHIRAN	CHECKED G. SLOCUM											
DETAILS	BY C. FIGUERRES	CHECKED G. SLOCUM											
QUANTITIES	BY K. SELVENTHIRAN	CHECKED E. MONTEVIRGEN											
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3577 PROJECT NUMBER & PHASE: 0200020151	CONTRACT NO.: 02-3E7904	DISREGARD PRINTS BEARING EARLIER REVISION DATES								
		0 1 2 3	REVISION DATES 3-28-13 5-24-13 3-28-13	SHEET OF 6 16	FILE => 05-0092-h-b1002.dgn								

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	299	12.3/12.9	127	149
REGISTERED CIVIL ENGINEER			DATE	1-6-14	
PLANS APPROVAL DATE			3-26-14		

REGISTERED PROFESSIONAL ENGINEER  
 K. SELVENTHIRAN  
 No. C67973  
 Exp. 06-30-15  
 CIVIL  
 STATE OF CALIFORNIA

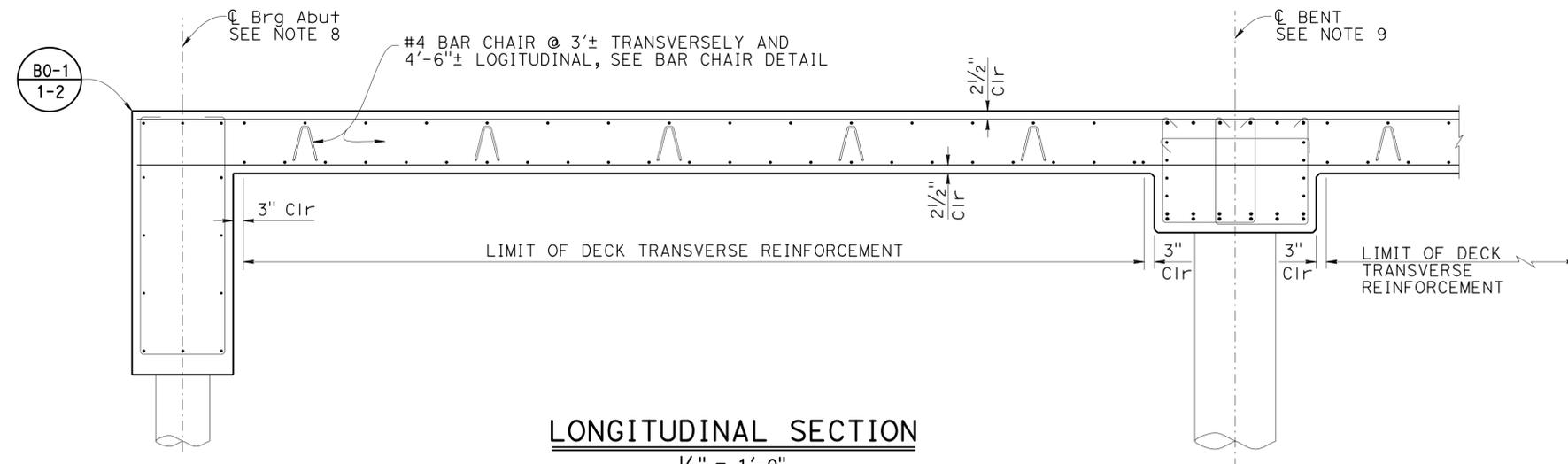
*The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.*



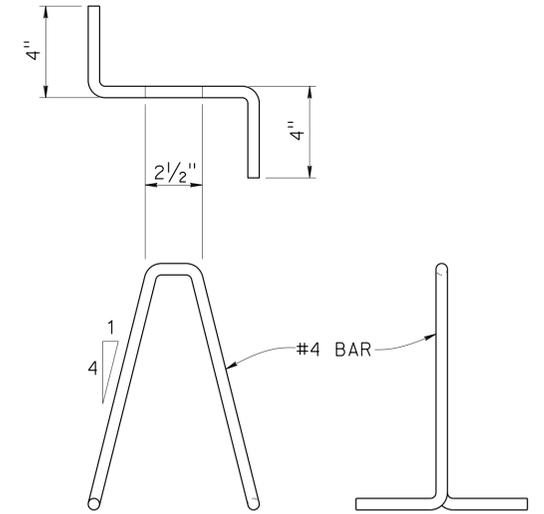
**TYPICAL SECTION**  
 $\frac{3}{4}'' = 1'-0''$

**NOTES:**

1. For Top Slab Reinforcement, see "TOP & BOTTOM DECK REINFORCEMENT" sheet.
2. For Bottom Slab Reinforcement, see "TOP & BOTTOM DECK REINFORCEMENT" sheet.
3. All barrier and slab top mat reinforcement shall be epoxy coated.
4. Transverse slab reinforcement shall be perpendicular to "A1" Line.
5. Spacing of all transverse bars is measured along "A1" Line.
6. Splices in top longitudinal bars to be located near center of span.
7. Splices in bottom longitudinal bars to be located near bent.
8. For abutment reinforcement, see "ABUTMENTS" sheet.
9. For Bent Cap reinforcement, see Bent Layout sheets.
10. For inside face of barrier rail, see "ARCHITECTURAL TREATMENT" sheet.
11. See "TUBULAR BICYCLE RAILING DETAILS" sheet.
12. Limits of prepare concrete bridge deck surface and place 1" polyester concrete overlay.



**LONGITUDINAL SECTION**  
 $\frac{1}{2}'' = 1'-0''$



**BAR CHAIR DETAIL**  
 $3'' = 1'-0''$

DESIGN	BY K. SELVENTHIRAN	CHECKED G. SLOCUM
DETAILS	BY C. FIGUERRES	CHECKED G. SLOCUM
QUANTITIES	BY K. SELVENTHIRAN	CHECKED E. MONTEVIRGEN

**STATE OF CALIFORNIA**  
 DEPARTMENT OF TRANSPORTATION

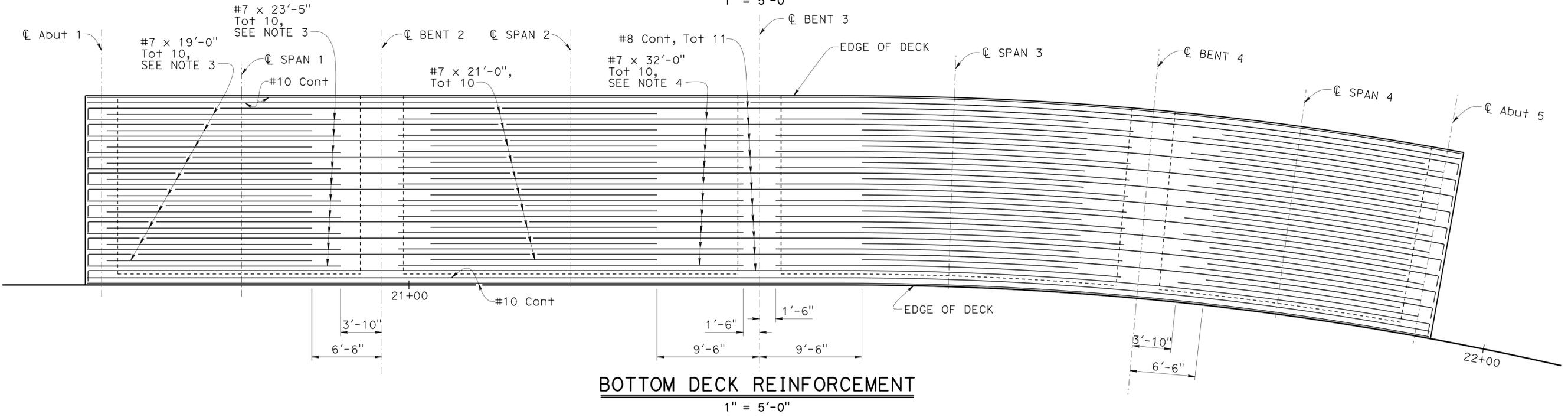
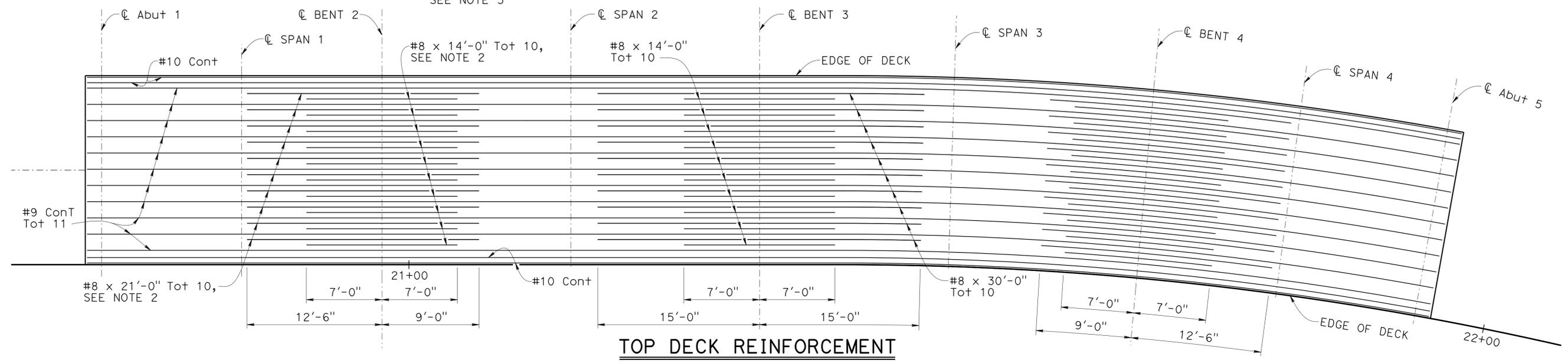
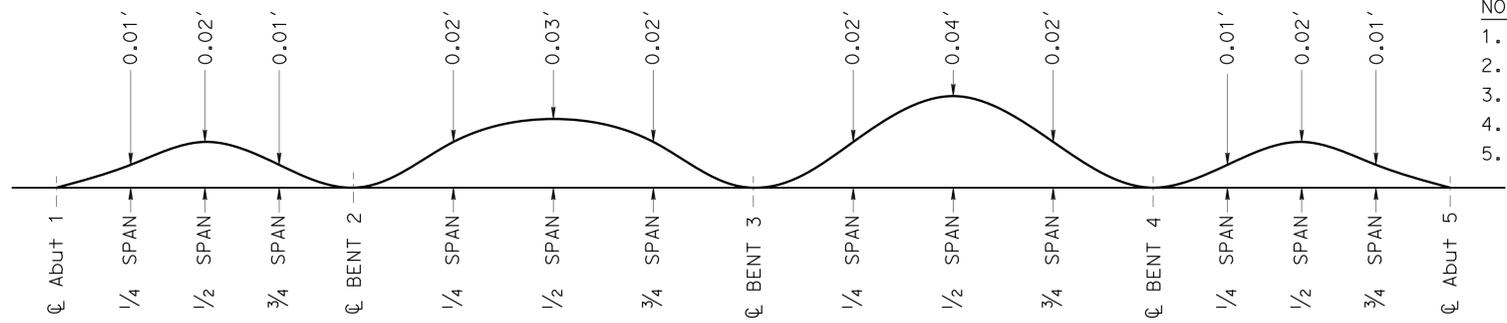
**DIVISION OF ENGINEERING SERVICES**  
 STRUCTURE DESIGN  
**DESIGN BRANCH 2**

BRIDGE NO.	05-0092
POST MILE	12.71

**COLLINS BAR SIDEHILL VIADUCT No. 2**  
**TYPICAL SECTION**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	299	12.3/12.9	128	149
REGISTERED CIVIL ENGINEER			DATE	1-6-14	
PLANS APPROVAL DATE			3-26-14		
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					

- NOTES:
1. Deck reinforcement on Abutment 5 is similar to Abutment 1.
  2. Deck reinforcement on Bent 2 is similar to Bents 4.
  3. Deck reinforcement on Span 1 is similar to Span 4.
  4. Deck reinforcement on Span 2 is similar to Span 3.
  5. Camber does not include allowance for falsework settlement.



DESIGN	BY K. SELVENTHIRAN	CHECKED G. SLOCUM
DETAILS	BY C. FIGUERRES	CHECKED G. SLOCUM
QUANTITIES	BY K. SELVENTHIRAN	CHECKED E. MONTEVIRGEN

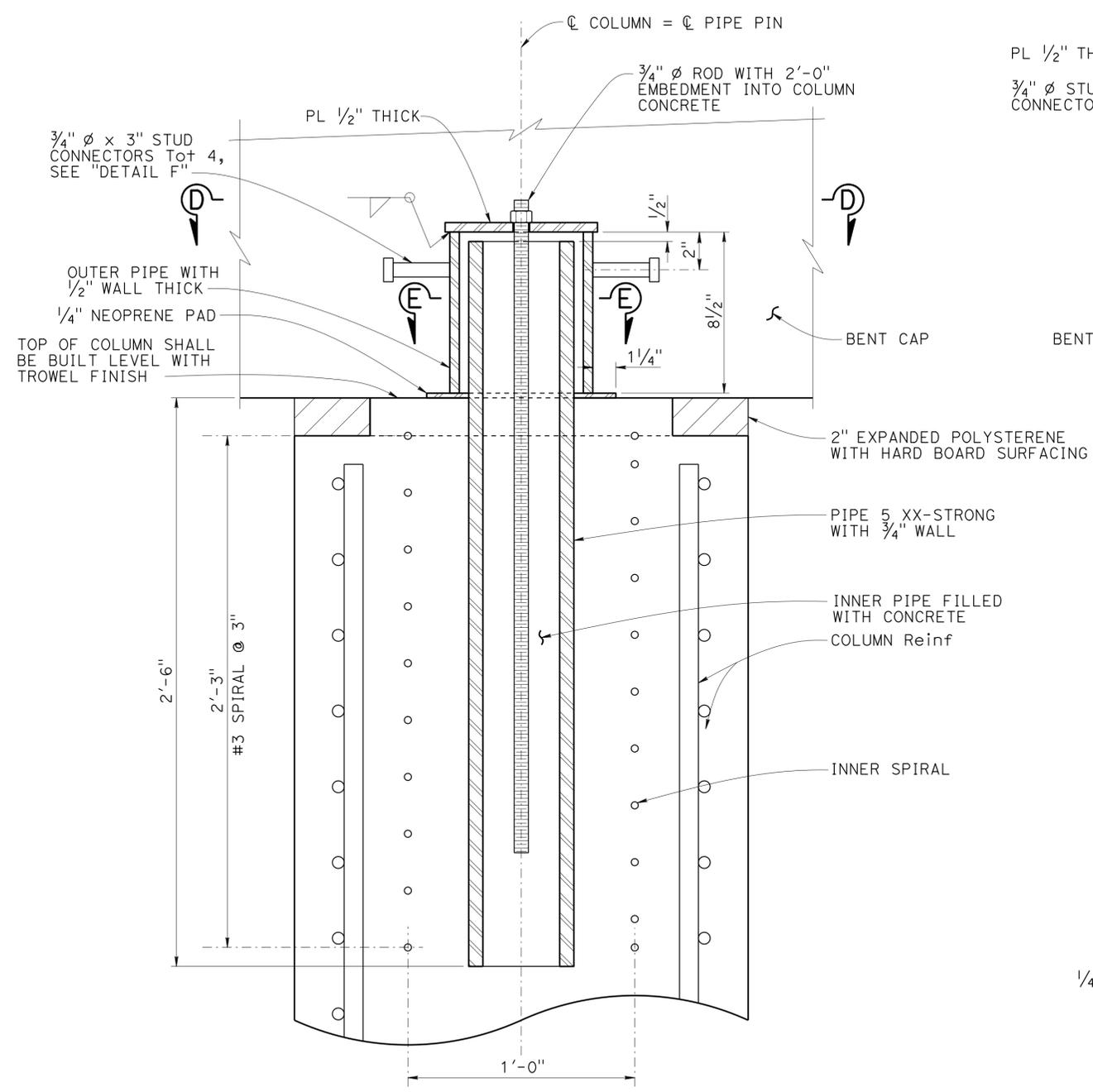
**STATE OF CALIFORNIA**  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
**DESIGN BRANCH 2**

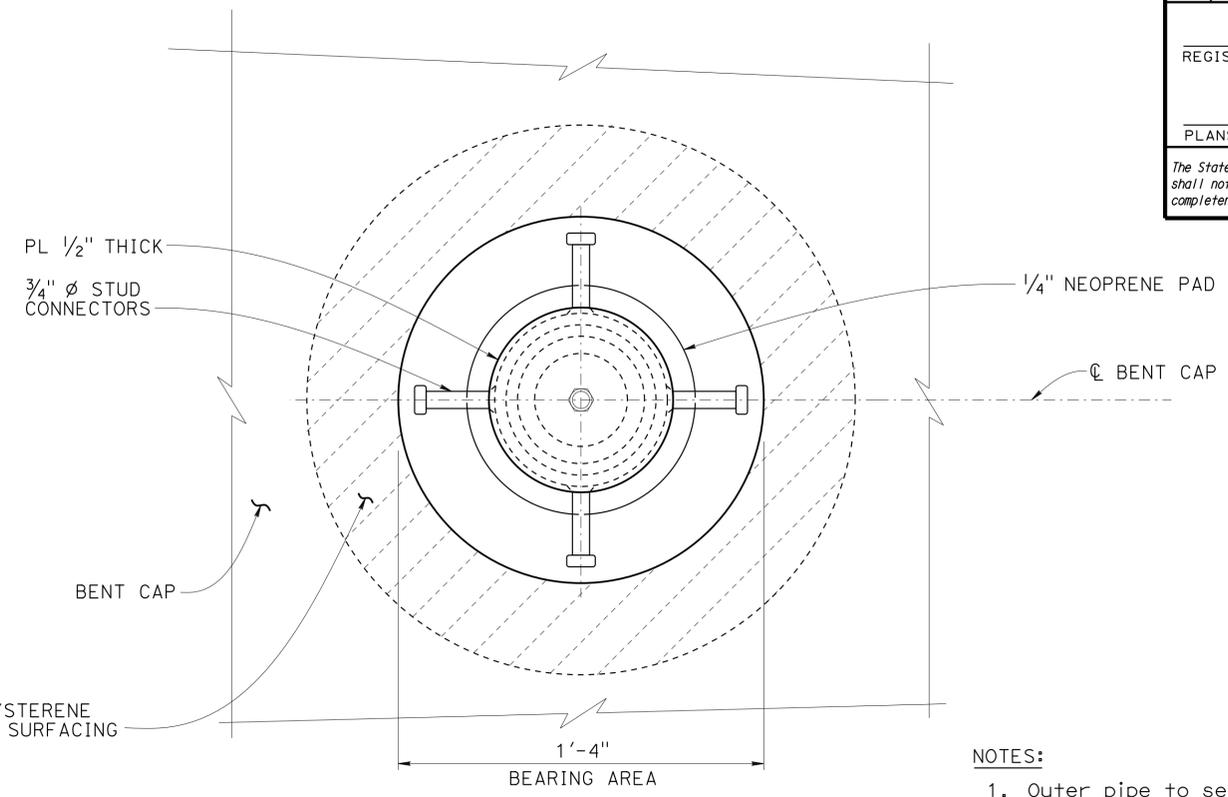
BRIDGE NO.	05-0092
POST MILE	12.71

**COLLINS BAR SIDEHILL VIADUCT No. 2**  
**TOP & BOTTOM DECK REINFORCEMENT**

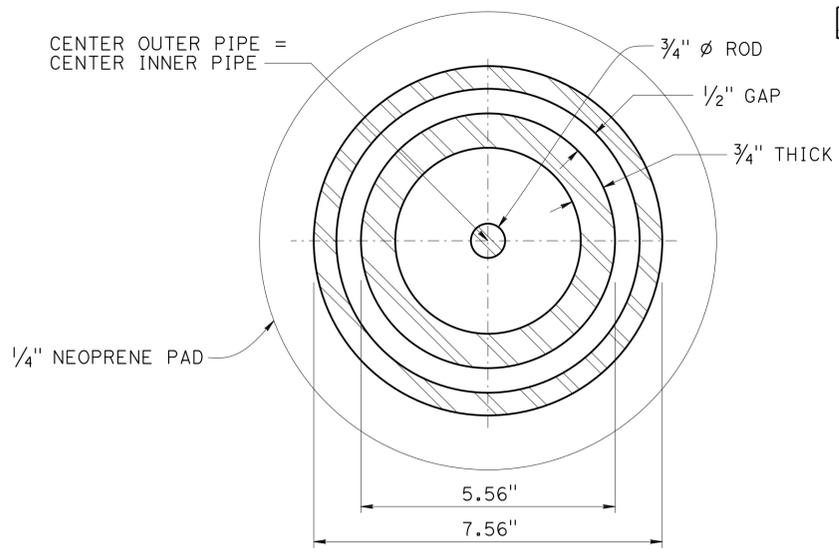
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	299	12.3/12.9	129	149
			1-6-14	REGISTERED CIVIL ENGINEER DATE	
			3-26-14	PLANS APPROVAL DATE	
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					



**ELEVATION**  
3" = 1'-0"



**VIEW D-D**  
3" = 1'-0"

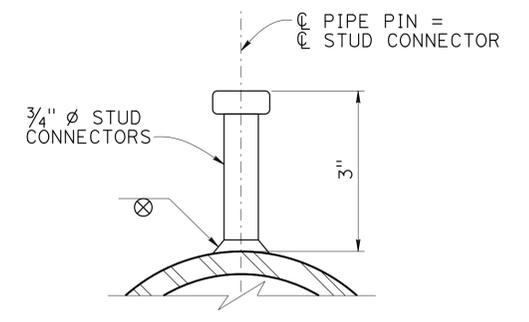


**SECTION E-E**  
6" = 1'-0"

- NOTES:**
- Outer pipe to seat tightly against 1/4" thick neoprene gasket placed on concrete around pipe pin.
  - Adjust spacing of main bent cap reinforcement to allow placement of pipe pin.
  - Details drawn showing level bent cap. Cap bearing surface may protrude below cap soffit when cap is not level.
  - Galvanize all pipe pin components, excluding inner spiral after fabrication.

Indicates 2" expanded polystyrene with hard board surfacing to be removed after completion of bent cap.

**B0-13**  
13-1

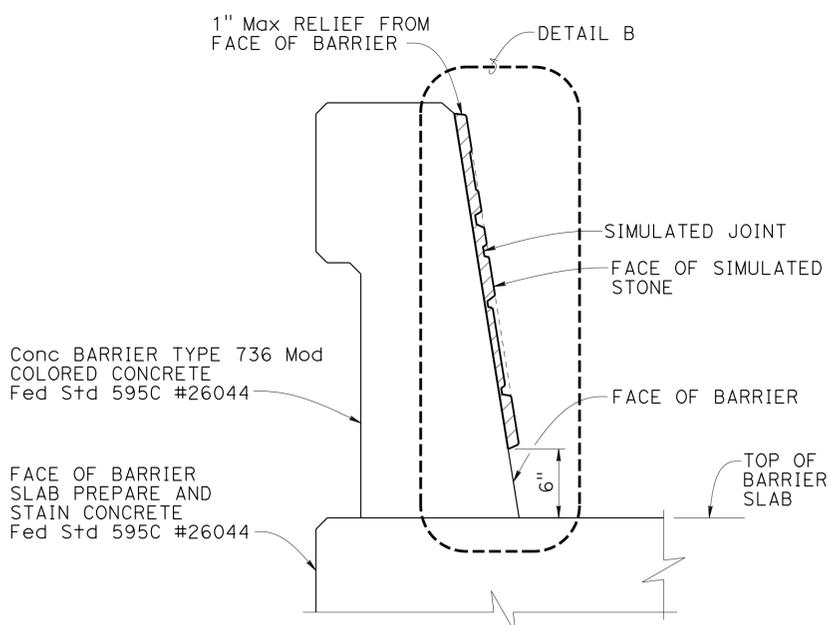


**DETAIL F**  
6" = 1'-0"

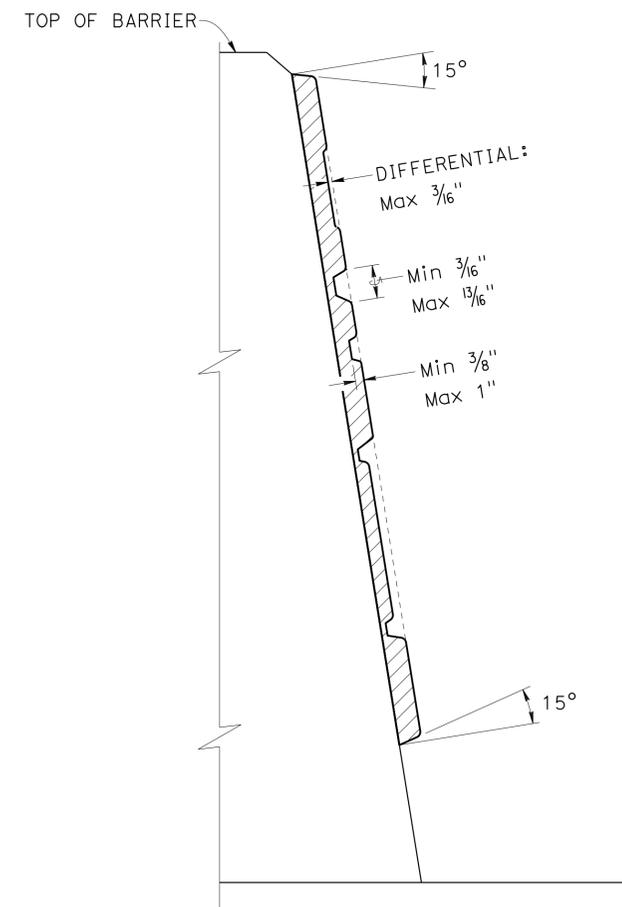
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	DESIGN	BY K. SELVENTHIRAN	CHECKED G. SLOCUM	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 2</b>	BRIDGE NO.	05-0092	<b>COLLINS BAR SIDEHILL VIADUCT No. 2</b> <b>PIPE PIN DETAILS</b>	
	DETAILS	BY C. FIGUERRES	CHECKED G. SLOCUM			POST MILE	12.71		
	QUANTITIES	BY K. SELVENTHIRAN	CHECKED E. MONTEVIRGEN			CONTRACT NO.:	02-3E7904		
				UNIT: 3577	PROJECT NUMBER & PHASE: 0200020151	DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES	SHEET 9 OF 16

USERNAME => s123119 DATE PLOTTED => 28-MAY-2014 TIME PLOTTED => 15:09

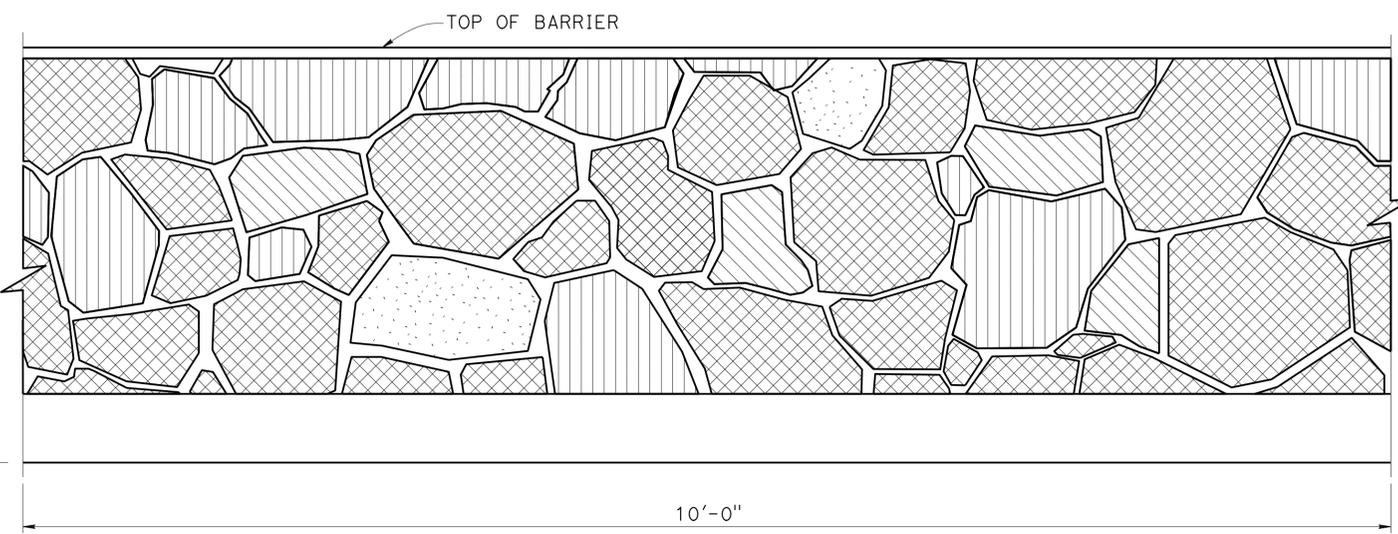
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	299	12.3/12.9	130	149
			1-6-14	DATE	
REGISTERED CIVIL ENGINEER			K. SELVENTHIRAN		
3-26-14			No. C67973		
PLANS APPROVAL DATE			Exp. 06-30-15		
			CIVIL		
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**SECTION A-A**  
1" = 1'-0"



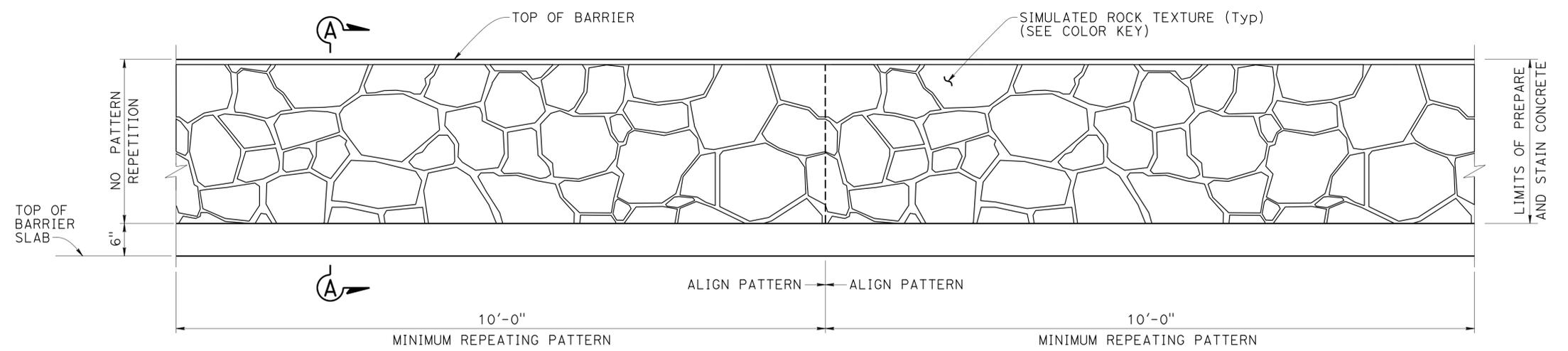
**DETAIL B**  
3" = 1'-0"



**COLOR KEY**  
1/2" = 1'-0"

**BASE COLOR LEGEND:**

[Hatched Box]	COLORED CONCRETE FEDERAL STANDARD 595C-26044 (VERY DARK GREY)
[Cross-hatched Box]	75% CONCRETE STAIN FEDERAL STANDARD 595C-26008 (DARK GRAY)
[Vertical Hatched Box]	20% CONCRETE STAIN FEDERAL STANDARD 595C-26122 (GREY BROWN)
[Dotted Box]	2% CONCRETE STAIN FEDERAL STANDARD 595C-26493 (LIGHT GRAY)
[Diagonal Hatched Box]	3% CONCRETE STAIN FEDERAL STANDARD 595C-32169 (RUST)



**SIMULATED ROCK TEXTURE  
ELEVATION**  
1" = 1'-0"

DESIGN	BY K. SELVENTHIRAN	CHECKED G. SLOCUM
DETAILS	BY C. FIGUERRES	CHECKED G. SLOCUM
QUANTITIES	BY K. SELVENTHIRAN	CHECKED E. MONTEVIRGEN

**STATE OF CALIFORNIA**  
DEPARTMENT OF TRANSPORTATION

**DIVISION OF ENGINEERING SERVICES**  
STRUCTURE DESIGN  
**DESIGN BRANCH 2**

BRIDGE NO.	05-0092
POST MILE	12.71

**COLLINS BAR SIDEHILL VIADUCT No. 2**  
**ARCHITECTURAL TREATMENT**

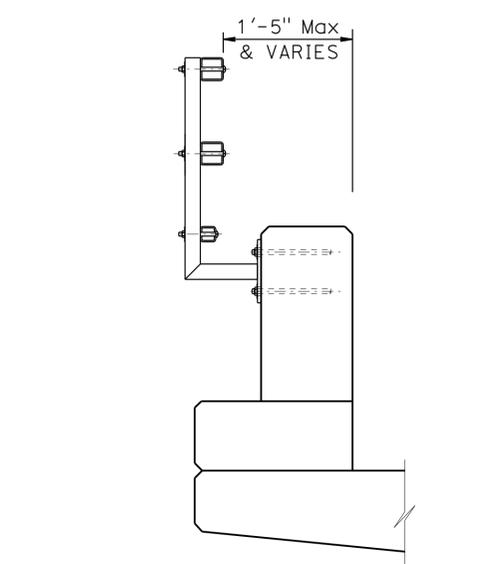
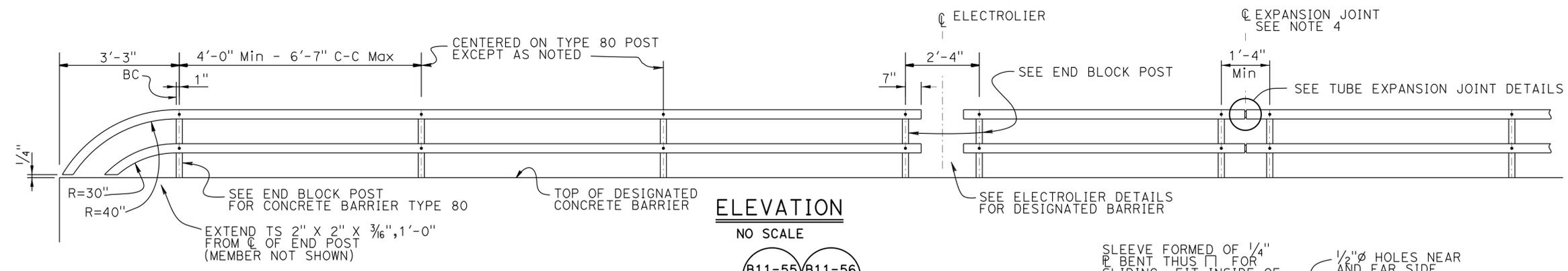
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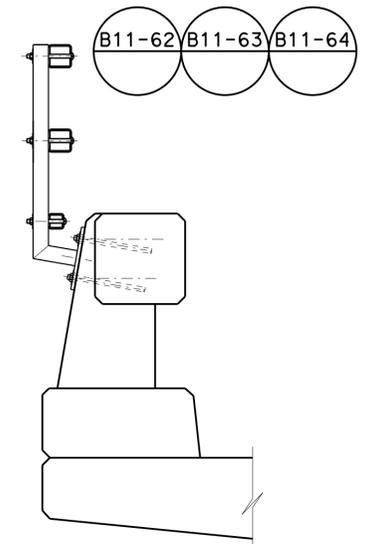
REGISTERED CIVIL ENGINEER	DATE 1-6-14
PLANS APPROVAL DATE 3-26-14	

K. SELVENTHIRAN  
 No. C67973  
 Exp. 06-30-15  
 CIVIL  
 STATE OF CALIFORNIA

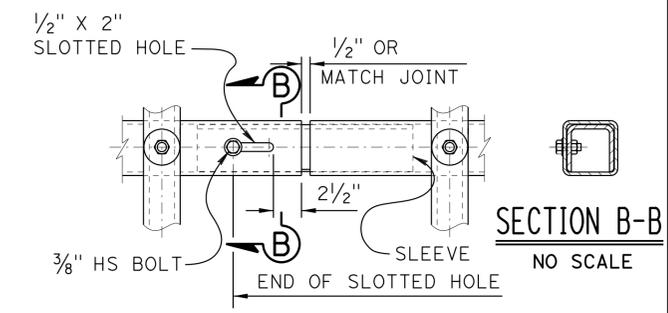
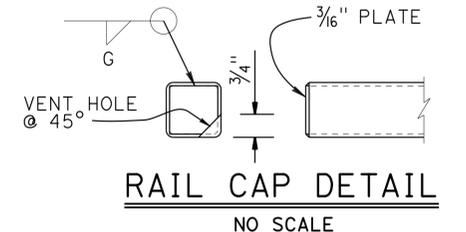
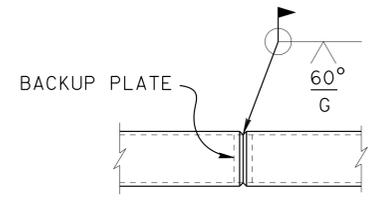
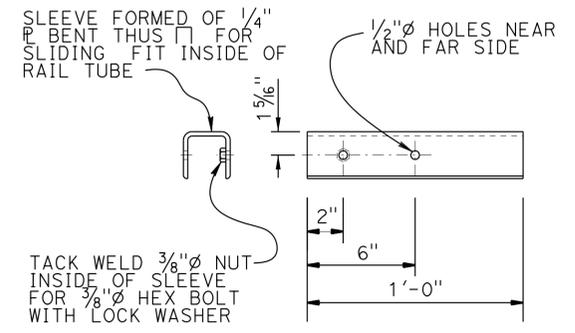
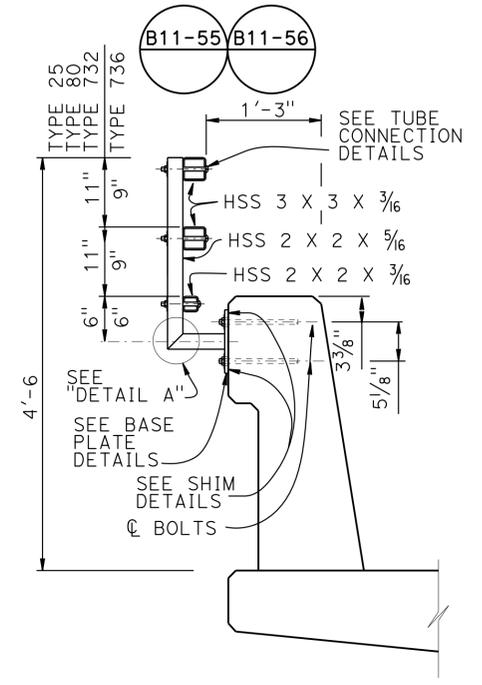
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NOTE: For details not shown, see "TYPE 732 OR 736"



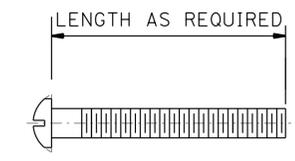
NOTE: For details not shown, see "TYPE 732 OR 736"



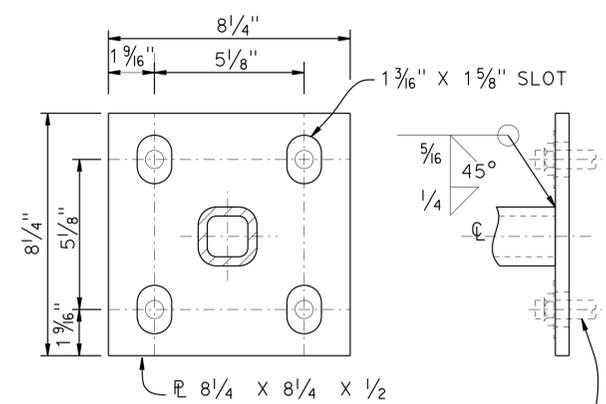
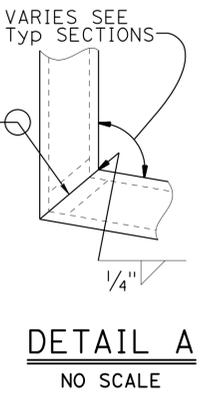
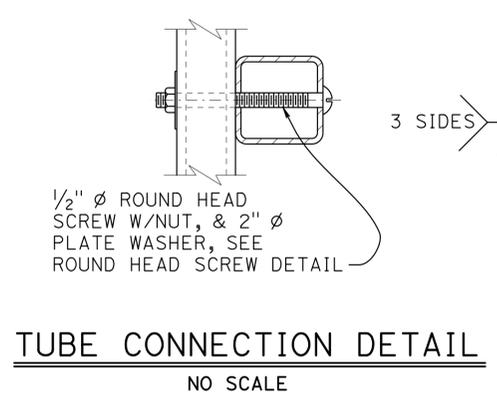
**TYPE 80 END BLOCK POST**  
1" = 1'-0"

**TYPE 80**  
1" = 1'-0"

**TYPE 732 OR 736**  
1" = 1'-0"

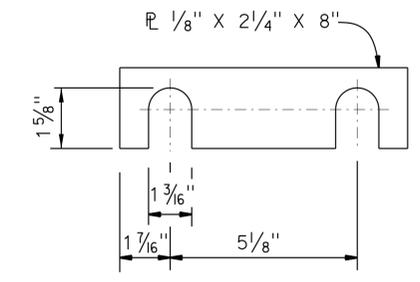


**ROUND HEAD SCREW DETAIL**  
NO SCALE



**BASE PLATE DETAIL**  
NO SCALE

5/8" Ø THREADED ROD 12" LONG W/NUTS AND 2" Ø PLATE WASHERS, Tot 4



**SHIM DETAILS**  
NO SCALE

- NOTES:
1. Post shall be normal to railing.
  2. Rail tubes shall be shop bent or fabricated to fit horizontal curve when radius is less than 12".
  3. Tube splices shall be located in the tubes spanning deck or wall joints. Increase joint width in tubes to match expansion joint width and increase sleeve length correspondingly.
  4. Top rail tube shall be continuous over not less than two posts except a short post spacing is permitted near deck or wall joints, electroliers, or other rail discontinuities as noted.
  5. See Project Plans for limits of tubular hand railing.

**COLLINS BAR SIDEHILL VIADUCT No. 2**

**CONCRETE BARRIER TYPE 80, 732 & 736**

**TUBULAR BICYCLE RAILING DETAILS**

STANDARD DRAWING	APPROVAL DATE March 2012
FILE NO. <b>xs16-035</b>	

BRIDGE NO. 05-0092	POST MILE 12.53
--------------------	-----------------

STATE OF CALIFORNIA	DIVISION OF ENGINEERING SERVICES
DEPARTMENT OF TRANSPORTATION	

UNIT: 3577	PROJECT NUMBER & PHASE: 0200020151	CONTRACT NO.: 02-3E7904
DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES 2-14-13	SHEET 11 OF 16

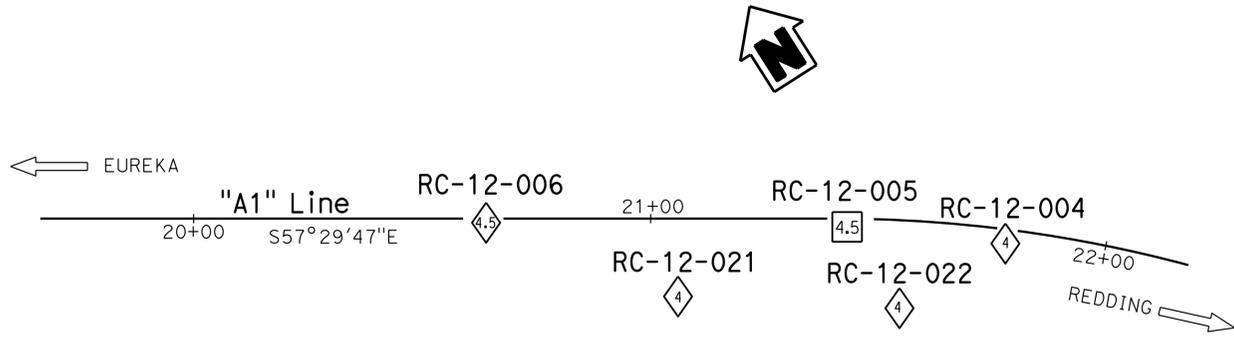
**BENCH MARK**

**SURVEY CONTROL**

CM 1263  
 Fnd capped rebar  
 76.14 Ft Lt "A1" Line, Rte 299  
 Sta 18+35.02  
 N 2,177,331.44  
 E 6,156,885.09  
 Elev =1246.03  
 NAVD 88

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	299	12.3/12.9	132	149

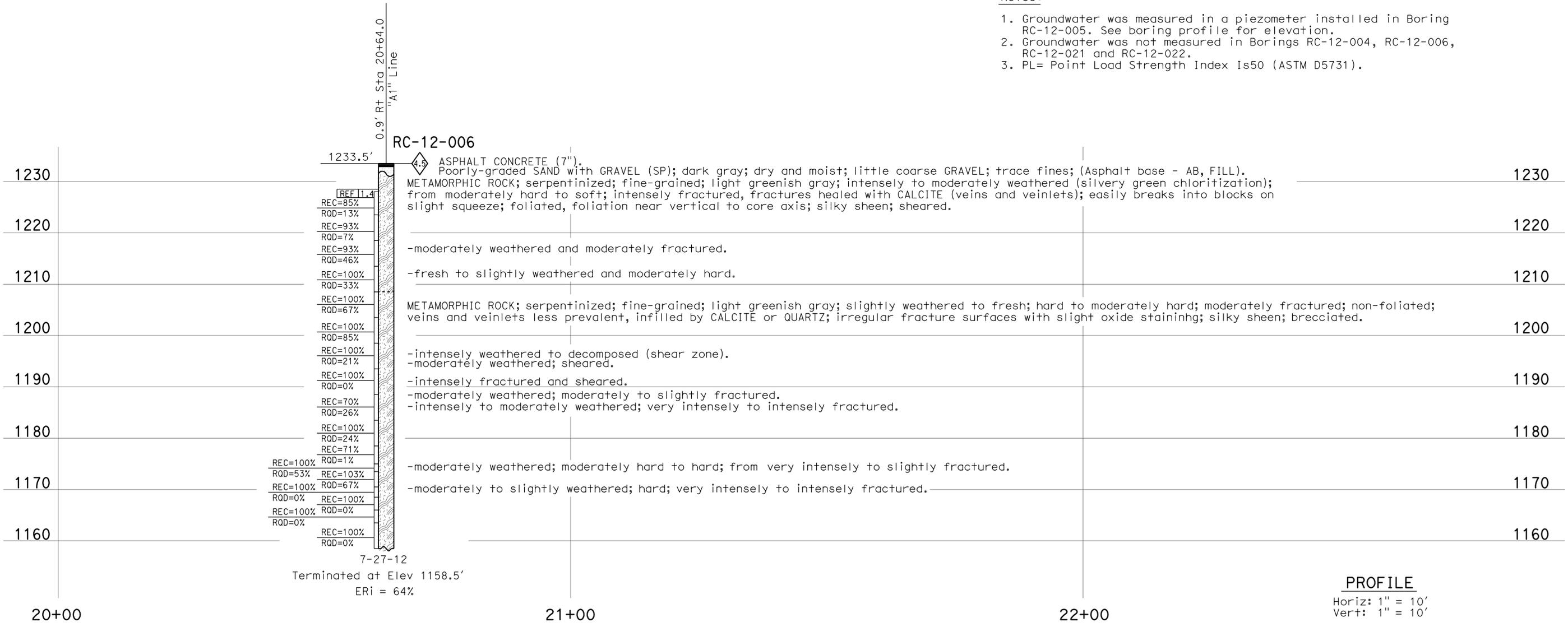
CERTIFIED ENGINEERING GEOLOGIST DATE 6-6-13  
 REID BUELL  
 PLANS APPROVAL DATE 3-26-14  
 PROFESSIONAL GEOLOGIST  
 Reid Buell  
 No. 1481  
 Exp. 4-30-15  
 CERTIFIED ENGINEERING GEOLOGIST  
 STATE OF CALIFORNIA  
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



**PLAN**  
 1" = 20'

**Notes:**

1. Groundwater was measured in a piezometer installed in Boring RC-12-005. See boring profile for elevation.
2. Groundwater was not measured in Borings RC-12-004, RC-12-006, RC-12-021 and RC-12-022.
3. PL= Point Load Strength Index Is50 (ASTM D5731).



<b>ENGINEERING SERVICES</b>		<b>MATERIALS AND GEOTECHNICAL SERVICES</b>		<b>STATE OF CALIFORNIA</b>		<b>DIVISION OF ENGINEERING SERVICES</b>		<b>BRIDGE NO.</b>		<b>COLLINS BAR SIDEHILL VIADUCT NO. 2</b>	
FUNCTIONAL SUPERVISOR		DRAWN BY: F. Nguyen		DEPARTMENT OF TRANSPORTATION		STRUCTURE DESIGN		05-0092		LOG OF TEST BORINGS 1 OF 5	
NAME: R. Bibbens		CHECKED BY: L. Paredes-Mejia		FIELD INVESTIGATION BY:		DESIGN BRANCH		POST MILE		12.3-12.7	
065 CIVIL LOG OF TEST BORINGS SHEET		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		0 1 2 3		UNIT: 3643		PROJECT NUMBER & PHASE: 02000201511		CONTRACT NO.: 02-3E7901	
						DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES		SHEET OF	
								03-29-13 06-06-13 05-06-13		12 16	

FILE => 05-0092-y-1+b01+.dgn

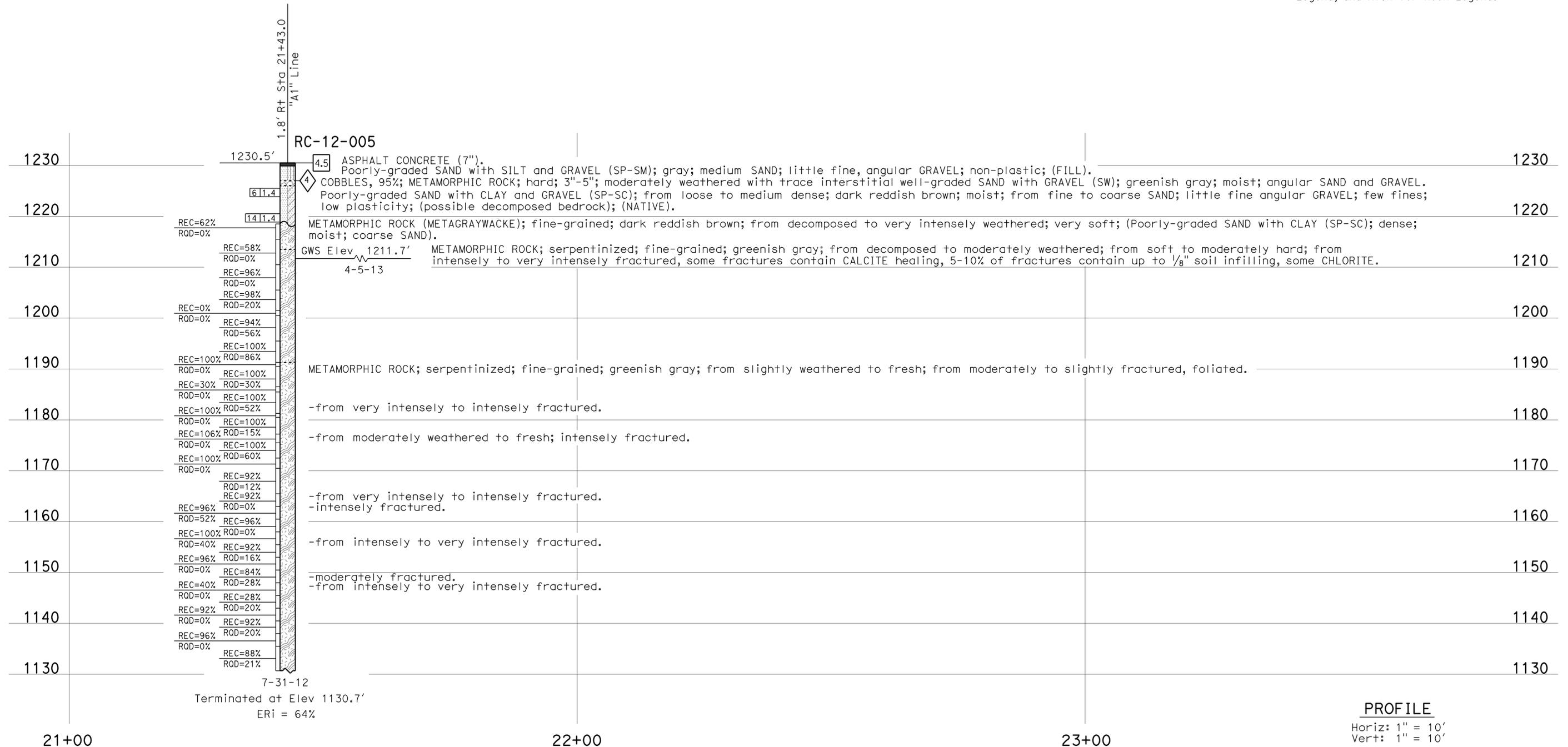


DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	299	12.3/12.9	134	149

CERTIFIED ENGINEERING GEOLOGIST DATE 6-6-13  
 REID BUELL  
 No. 1481  
 Exp. 4-30-15  
 CERTIFIED ENGINEERING GEOLOGIST  
 STATE OF CALIFORNIA  
 PLANS APPROVAL DATE 3-26-14  
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

FOR PLAN VIEW, SEE  
"LOG OF TEST BORINGS 1 OF 5"

This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).  
See 2010 Standard Plans A10F and A10G for Soil Legend, and A10H for Rock Legend.



**PROFILE**  
Horiz: 1" = 10'  
Vert: 1" = 10'

<b>ENGINEERING SERVICES</b>		<b>MATERIALS AND GEOTECHNICAL SERVICES</b>		<b>STATE OF CALIFORNIA</b>		<b>DIVISION OF ENGINEERING SERVICES</b>		<b>BRIDGE NO.</b>		<b>COLLINS BAR SIDEHILL VIADUCT NO. 2</b>	
FUNCTIONAL SUPERVISOR		DRAWN BY: F. Nguyen		DEPARTMENT OF TRANSPORTATION		STRUCTURE DESIGN		05-0092		<b>LOG OF TEST BORINGS 3 OF 5</b>	
NAME: R. Bibbens		CHECKED BY: L. Paredes-Mejia		FIELD INVESTIGATION BY: B. Webster.		DESIGN BRANCH		POST MILE			
								12.3-12.7			
065 CIVIL LOG OF TEST BORINGS SHEET		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		UNIT: 3643		PROJECT NUMBER & PHASE: 02000201511		CONTRACT NO.: 02-3E7901		REVISION DATES	
				0 1 2 3				DISREGARD PRINTS BEARING EARLIER REVISION DATES		SHEET 14 OF 16	

DATE PLOTTED => 15:09  
USERNAME => s123119



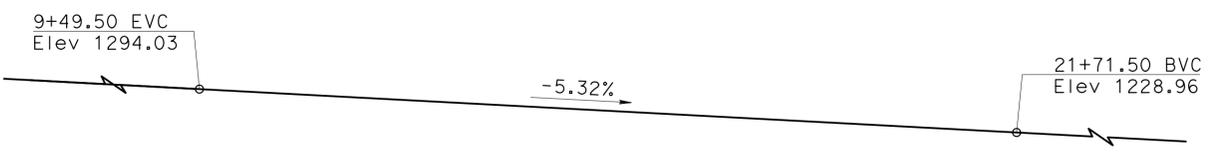


DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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			1-6-14	DATE	
REGISTERED CIVIL ENGINEER			DATE		
3-26-14			PLANS APPROVAL DATE		
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of scanned copies of this plan sheet.					

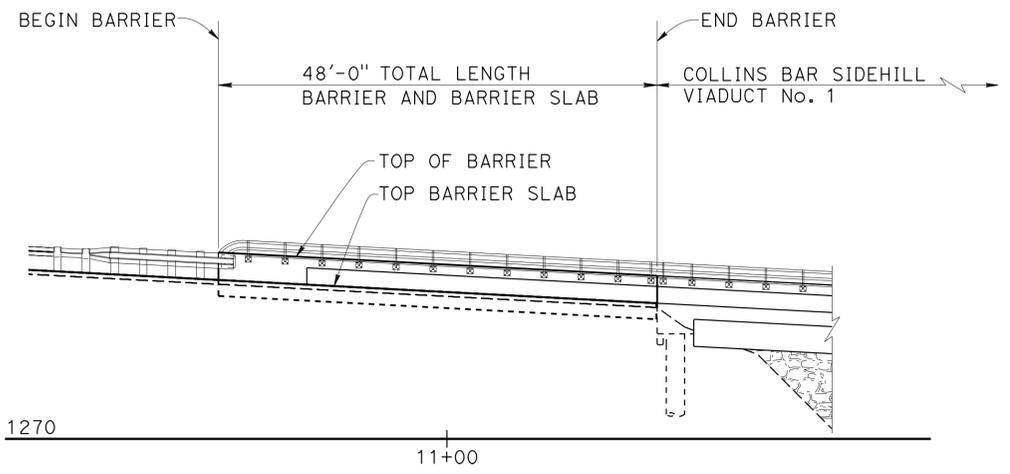


QUANTITIES

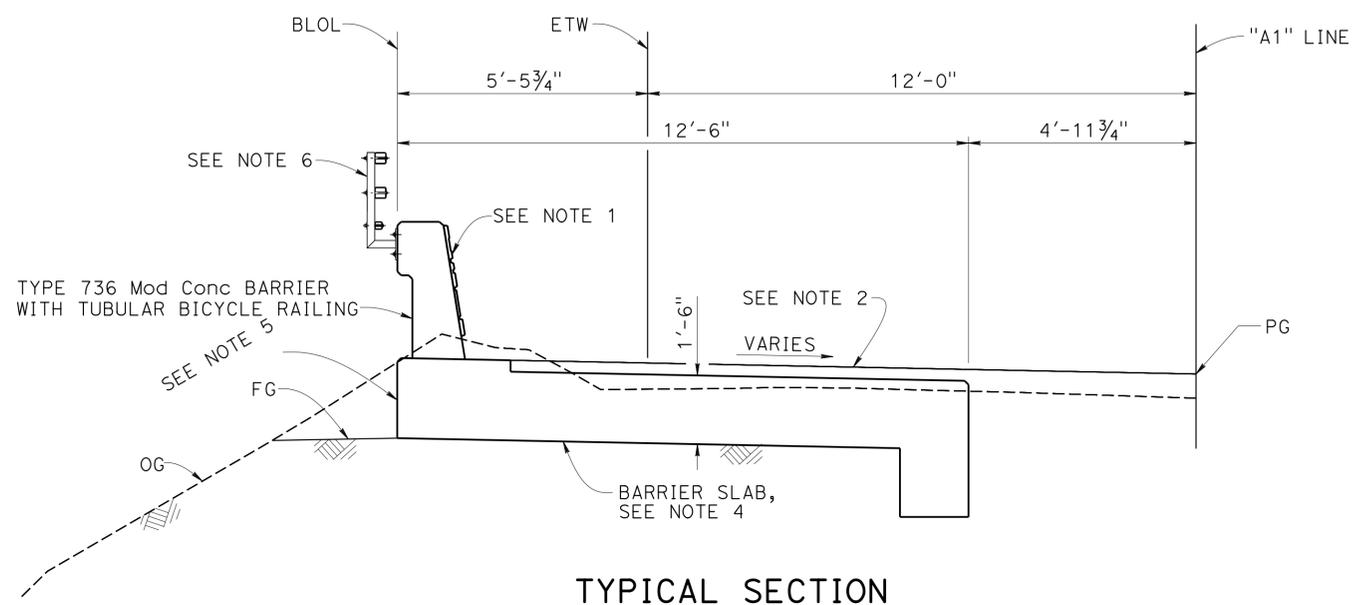
STRUCTURAL CONCRETE, BARRIER SLAB	39	CY
PREPARE AND STAIN CONCRETE	222	SQFT
TUBULAR BICYCLE RAILING	48	LF
CONCRETE BARRIER (TYPE 736 MODIFIED)	48	LF



**PROFILE GRADE**  
NO SCALE



**MIRRORED ELEVATION**  
1" = 10'-0"



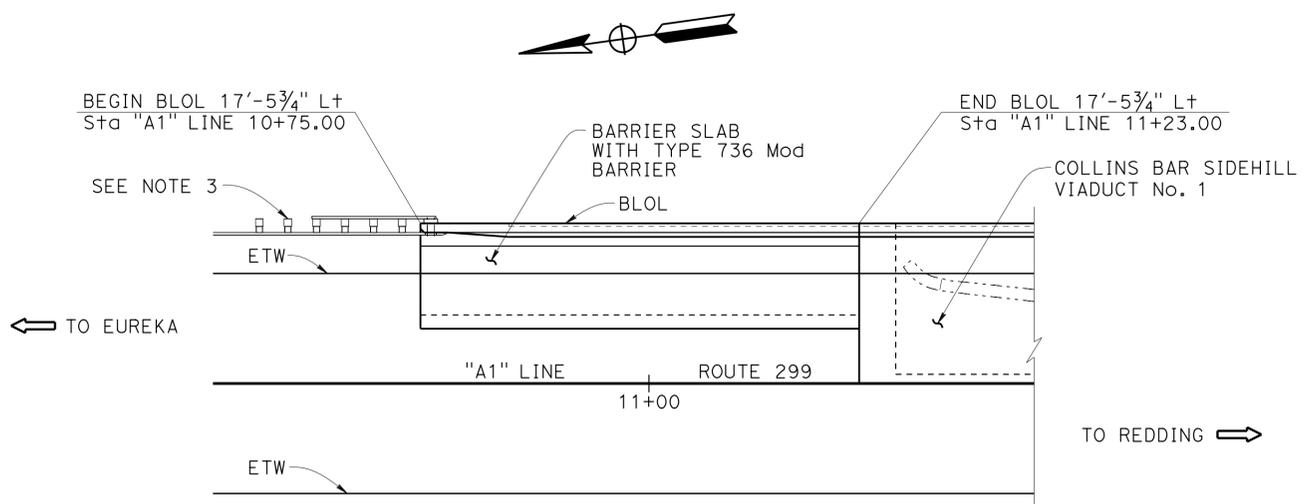
**TYPICAL SECTION**  
1/2" = 1'-0"

**INDEX TO PLANS**

1. GENERAL PLAN SLAB No. 1
2. GENERAL PLAN SLAB No. 2
3. GENERAL PLAN SLAB No. 3
4. GENERAL PLAN SLAB No. 4
5. DETAILS AND GENERAL NOTES
6. DECK CONTOURS No. 1
7. DECK CONTOURS No. 2
8. ARCHITECTURAL TREATMENT
9. TUBULAR BICYCLE RAILING DETAILS
10. LOG OF TEST BORINGS 1 OF 4
11. LOG OF TEST BORINGS 2 OF 4
12. LOG OF TEST BORINGS 3 OF 4
13. LOG OF TEST BORINGS 4 OF 4

**NOTES:**

1. Inside face of concrete barrier to receive concrete surface texture.
  2. New overlay, see "Road Plans".
  3. Metal beam guard rail, see "Road Plans".
  4. For Barrier Slab Details, see DETAIL A "DETAILS" sheet.
  5. Prepare and stain exterior face of Barrier Slab.
  6. Paint tubular bicycle railing.
- Indicates existing  
BLOL Concrete Barrier Rail Layout Line



**PLAN**  
1" = 10'-0"

G. SETBERG DESIGN ENGINEER	DESIGN	BY G. SLOCUM	CHECKED N. NGUYEN	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 2</b>	BRIDGE NO.	<b>COLLINS BAR BARRIER SLABS</b> <b>GENERAL PLAN SLAB No. 1</b>			
	DETAILS	BY C. FIGUERRES	CHECKED N. NGUYEN	LAYOUT	BY G. SLOCUM			CHECKED N. NGUYEN		SLAB		
	QUANTITIES	BY G. SLOCUM	CHECKED C. FIGUERRES	SPECIFICATIONS	BY D. KLEIN			PLANS AND SPECS COMPARED D. KLEIN		POST MILE	Var	
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS						0 1 2 3	UNIT: 3577	PROJECT NUMBER & PHASE: 0200020151	CONTRACT NO.: 02-3E7904	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 131 OF 131

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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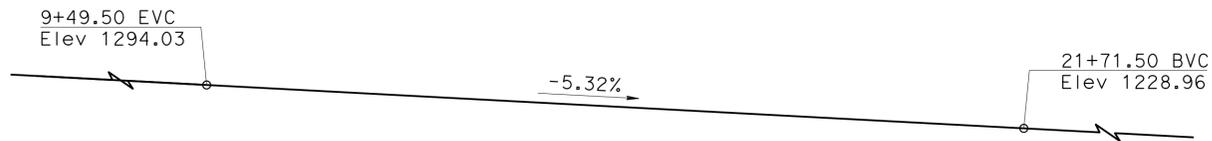
  

REGISTERED CIVIL ENGINEER	DATE
<i>[Signature]</i>	1-6-14
PLANS APPROVAL DATE	
	3-26-14

REGISTERED PROFESSIONAL ENGINEER	
K. SELVENTHIRAN	
No.	C67973
Exp.	06-30-15
CIVIL	
STATE OF CALIFORNIA	

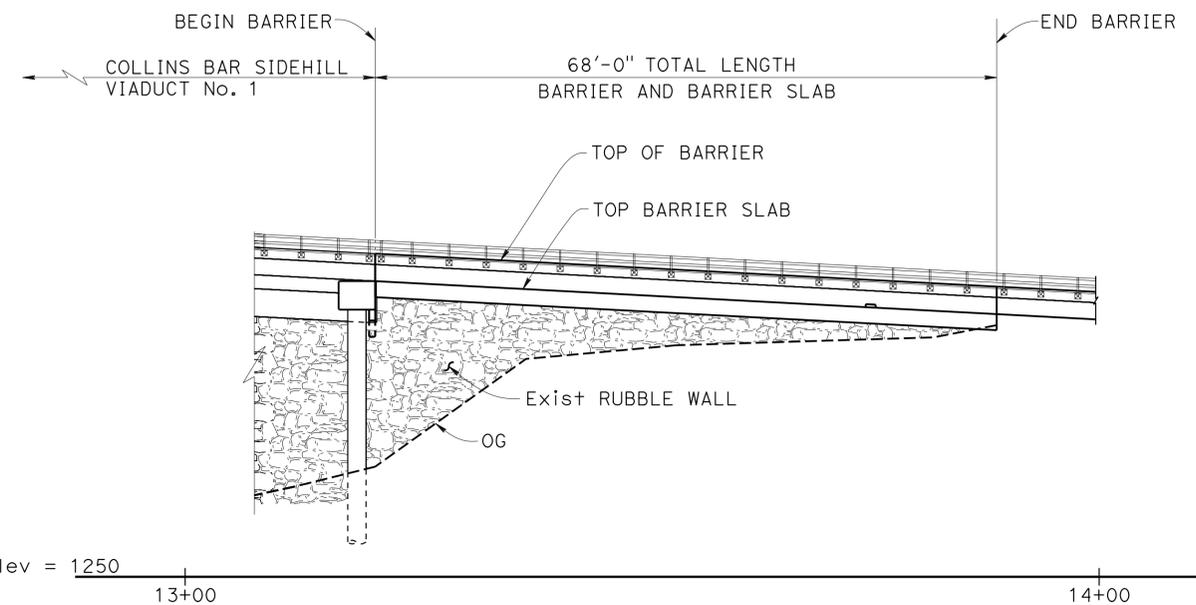
*The State of California or its officers or agents shall not be responsible for the accuracy or completeness of scanned copies of this plan sheet.*



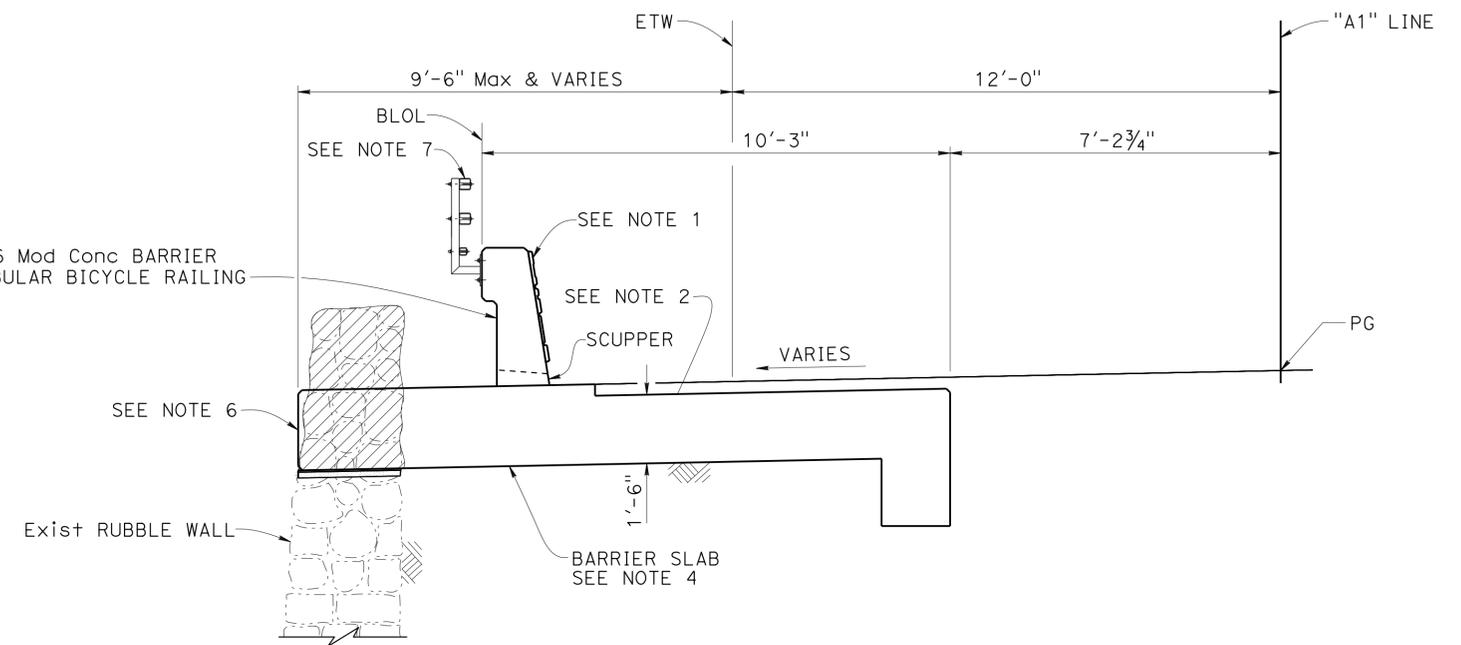
**PROFILE GRADE**  
NO SCALE

QUANTITIES

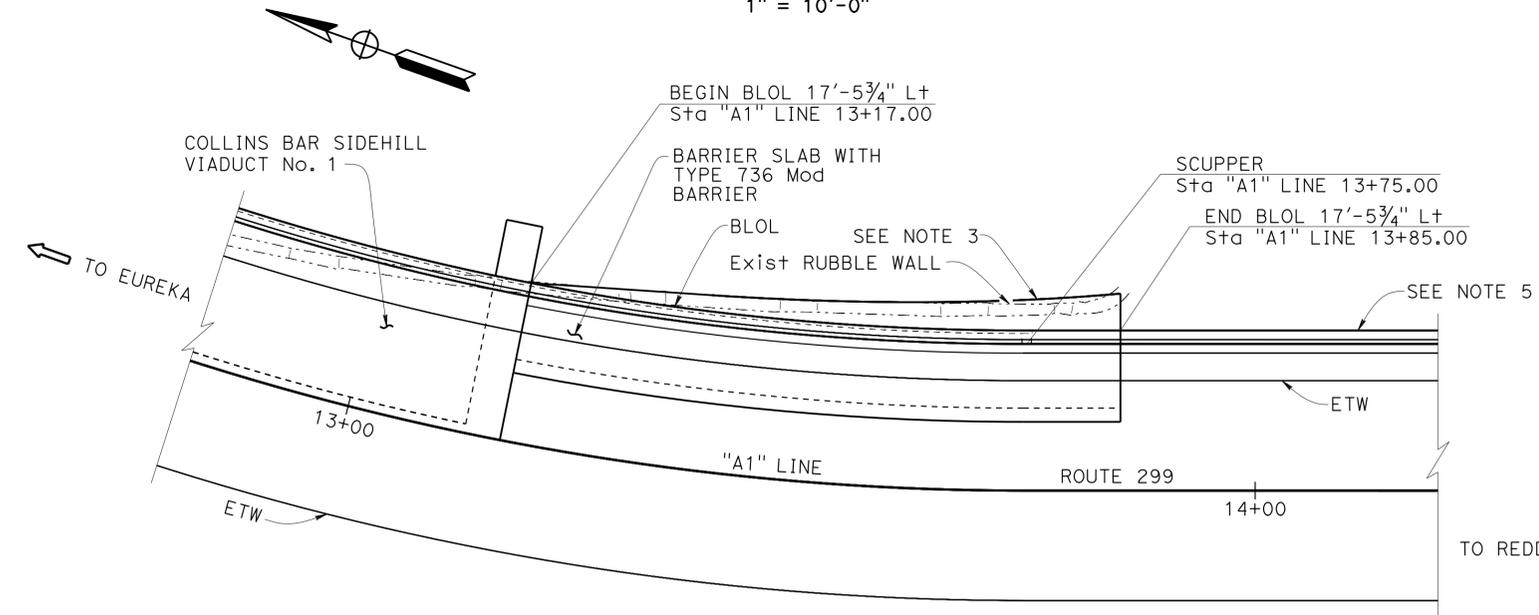
RECONSTRUCT RUBBLE WALL	LUMP SUM
STRUCTURAL CONCRETE, BARRIER SLAB	57 CY
PREPARE AND STAIN CONCRETE	462 SQFT
TUBULAR BICYCLE RAILING	68 LF
CONCRETE BARRIER (TYPE 736 MODIFIED)	68 LF



**MIRRORED ELEVATION**  
1" = 10'-0"



**TYPICAL SECTION**  
1/2" = 1'-0"



**PLAN**  
1" = 10'-0"

**NOTES:**

1. Inside face of concrete barrier to receive concrete surface texture.
  2. New overlay, see "Road Plans".
  3. Smooth curve from beginning to end of Barrier Rail Slab with radius = 412' ± and approximately matching edge of rubble wall.
  4. For Barrier Slab Details, see DETAIL B "DETAILS" sheet.
  5. Concrete Barrier Type 736B Mod, see "Road Plans".
  6. Prepare and stain exterior face of Barrier Slab.
  7. Paint tubular bicycle railing.
- Conflicting portion of wall to be removed  
 Indicates existing  
 BLOL Concrete Barrier Layout Line

DESIGN	BY G. SLOCUM	CHECKED N. NGUYEN	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93
DETAILS	BY C. FIGUERRES	CHECKED N. NGUYEN	LAYOUT	BY G. SLOCUM
QUANTITIES	BY G. SLOCUM	CHECKED C. FIGUERRES	SPECIFICATIONS	BY D. KLEIN
				CHECKED N. NGUYEN
				PLANS AND SPECS COMPARED D. KLEIN

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 2

BRIDGE NO.	SLAB
POST MILE	Var

**COLLINS BAR BARRIER SLABS**  
**GENERAL PLAN SLAB No. 2**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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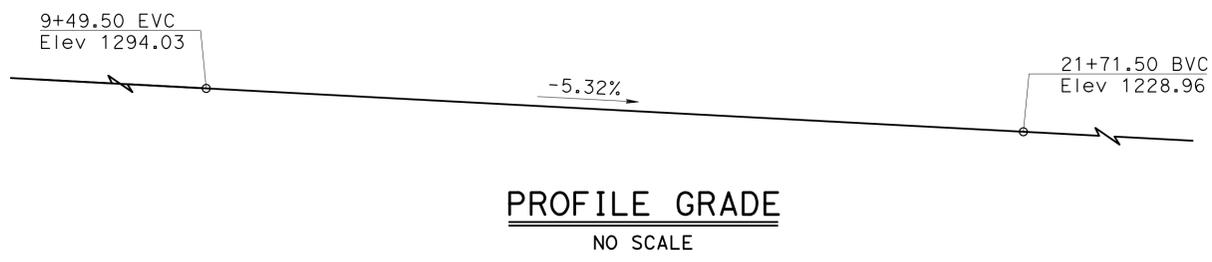
  

REGISTERED CIVIL ENGINEER	DATE
<i>[Signature]</i>	1-6-14
PLANS APPROVAL DATE	
3-26-14	

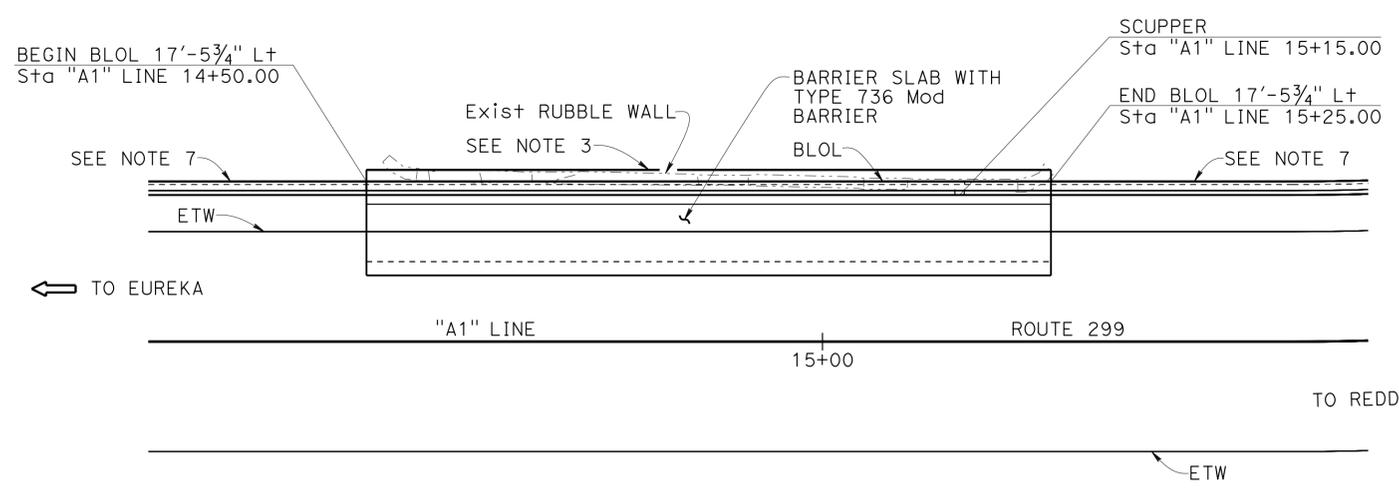
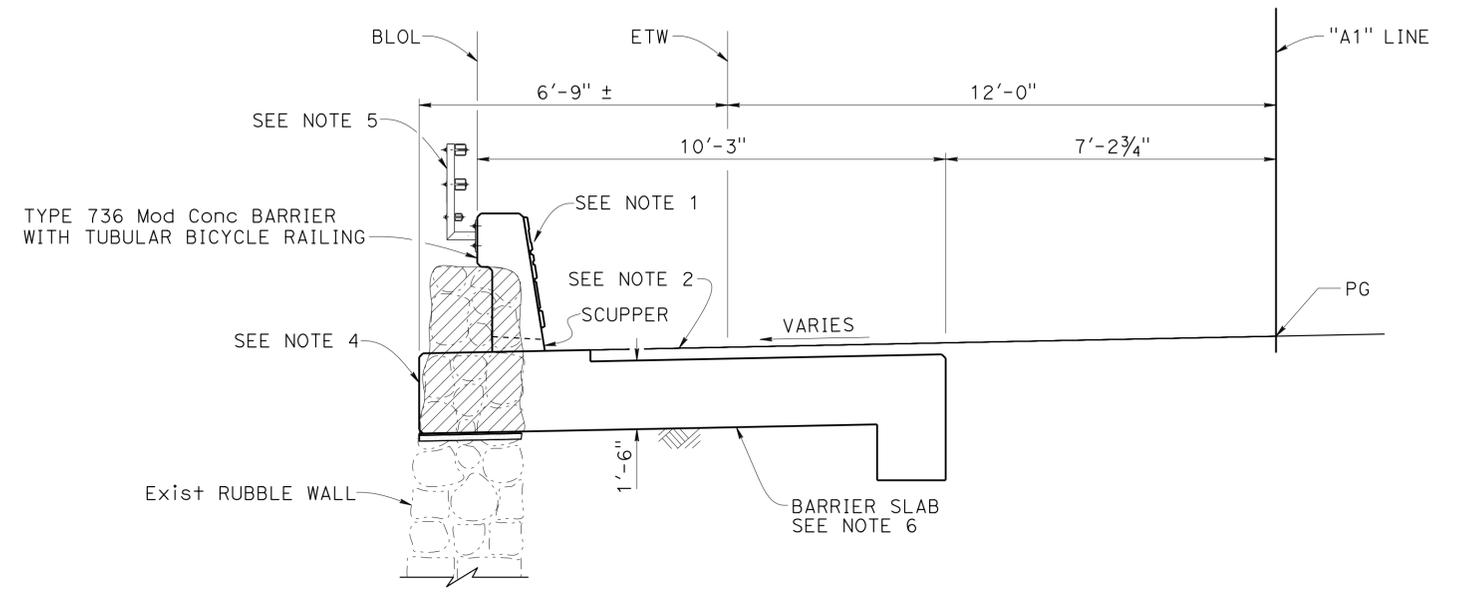
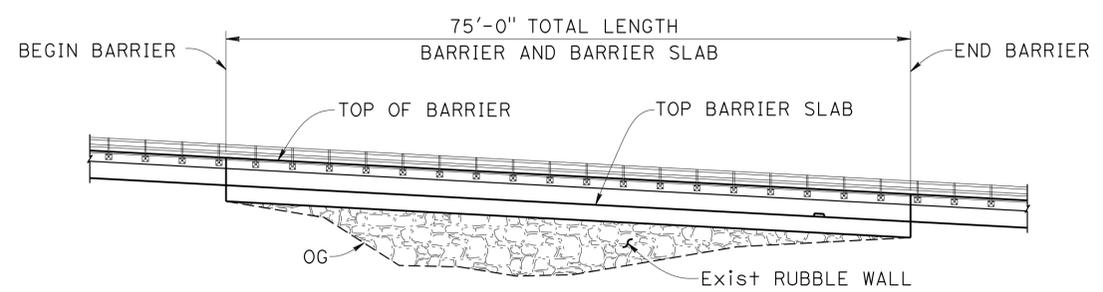
REGISTERED PROFESSIONAL ENGINEER	
K. SELVENTHIRAN	
No.	C67973
Exp.	06-30-15
CIVIL	
STATE OF CALIFORNIA	

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QUANTITIES

RECONSTRUCT RUBBLE WALL	LUMP SUM
STRUCTURAL CONCRETE, BARRIER SLAB	57 CY
PREPARE AND STAIN CONCRETE	442 SQFT
TUBULAR BICYCLE RAILING	75 LF
CONCRETE BARRIER (TYPE 736 MODIFIED)	75 LF



- NOTES:
1. Inside face of concrete barrier to receive concrete surface texture.
  2. New overlay, see "Road Plans".
  3. Straight line from beginning to end of Barrier Slab and approximately matching edge of rubble wall.
  4. Prepare and stain exterior face of Barrier Slab.
  5. Paint tubular bicycle railing.
  6. For Barrier Slab Details, see DETAIL B "DETAILS" sheet.
  7. Concrete Barrier Type 736B Mod, see "Road Plans".
- Conflicting portion of wall to be removed  
 Indicates existing  
 BLOL Concrete Barrier Layout Line

G. SETBERG DESIGN ENGINEER	DESIGN	BY G. SLOCUM	CHECKED N. NGUYEN	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 2	BRIDGE NO.	COLLINS BAR BARRIER SLABS GENERAL PLAN SLAB No. 3	
	DETAILS	BY C. FIGUERRES	CHECKED N. NGUYEN	LAYOUT	BY G. SLOCUM			CHECKED N. NGUYEN		SLAB
	QUANTITIES	BY G. SLOCUM	CHECKED C. FIGUERRES	SPECIFICATIONS	BY D. KLEIN			PLANS AND SPECS COMPARED D. KLEIN		POST MILE

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

UNIT: 3577 PROJECT NUMBER & PHASE: 0200020151 CONTRACT NO.: 02-3E7904

DISREGARD PRINTS BEARING EARLIER REVISION DATES

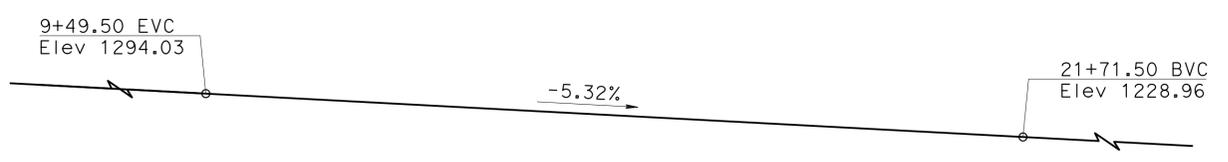
REVISION DATES	SHEET	OF
8-26-13	1	3
1-3-14	3	3
3-26-14	3	3

STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.09-01-10) FILE => barrier\_slab-a-gp03.dgn

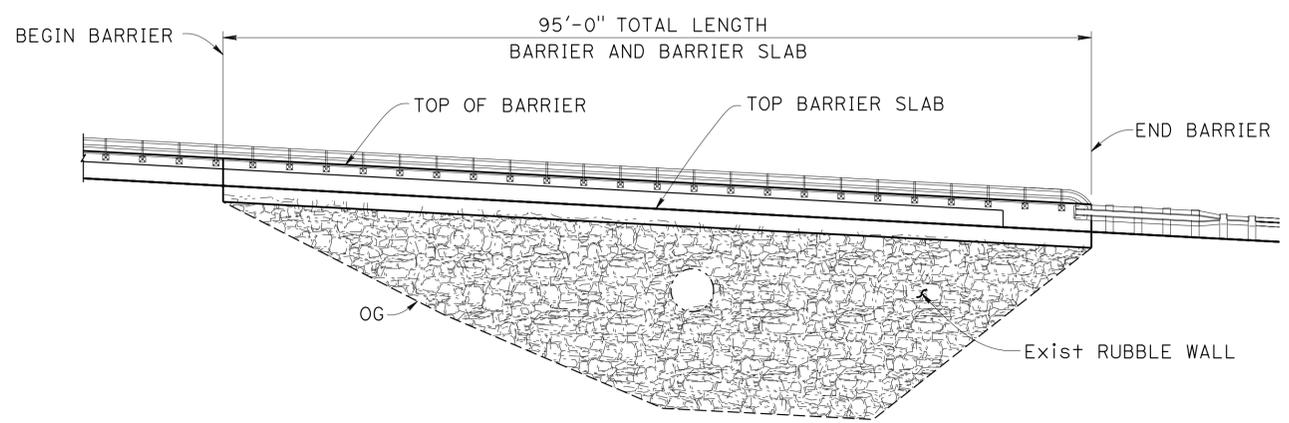
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	299	12.3/12.9	140	149
REGISTERED CIVIL ENGINEER			DATE	1-6-14	
PLANS APPROVAL DATE			3-26-14		
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of scanned copies of this plan sheet.					



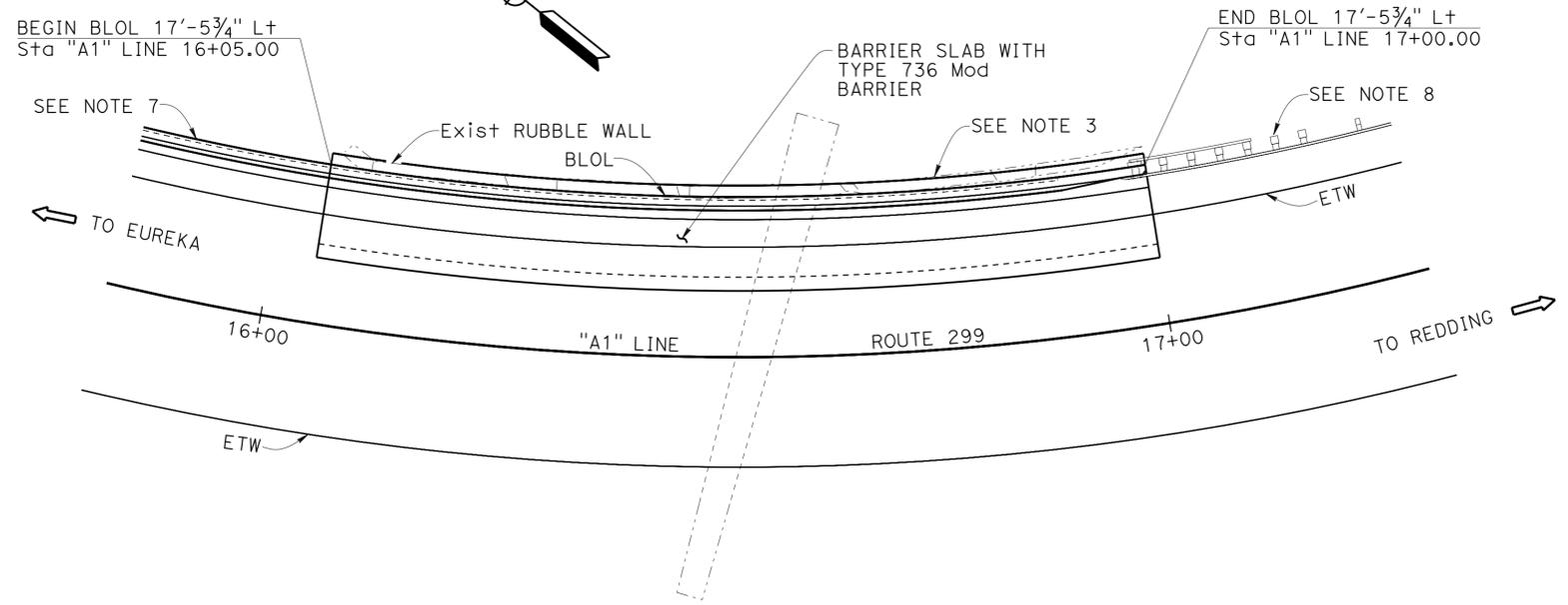
QUANTITIES	LUMP SUM
RECONSTRUCT RUBBLE WALL	72 CY
STRUCTURAL CONCRETE, BARRIER SLAB	558 SQFT
PREPARE AND STAIN CONCRETE	95 LF
TUBULAR BICYCLE RAILING	95 LF
CONCRETE BARRIER (TYPE 736 MODIFIED)	



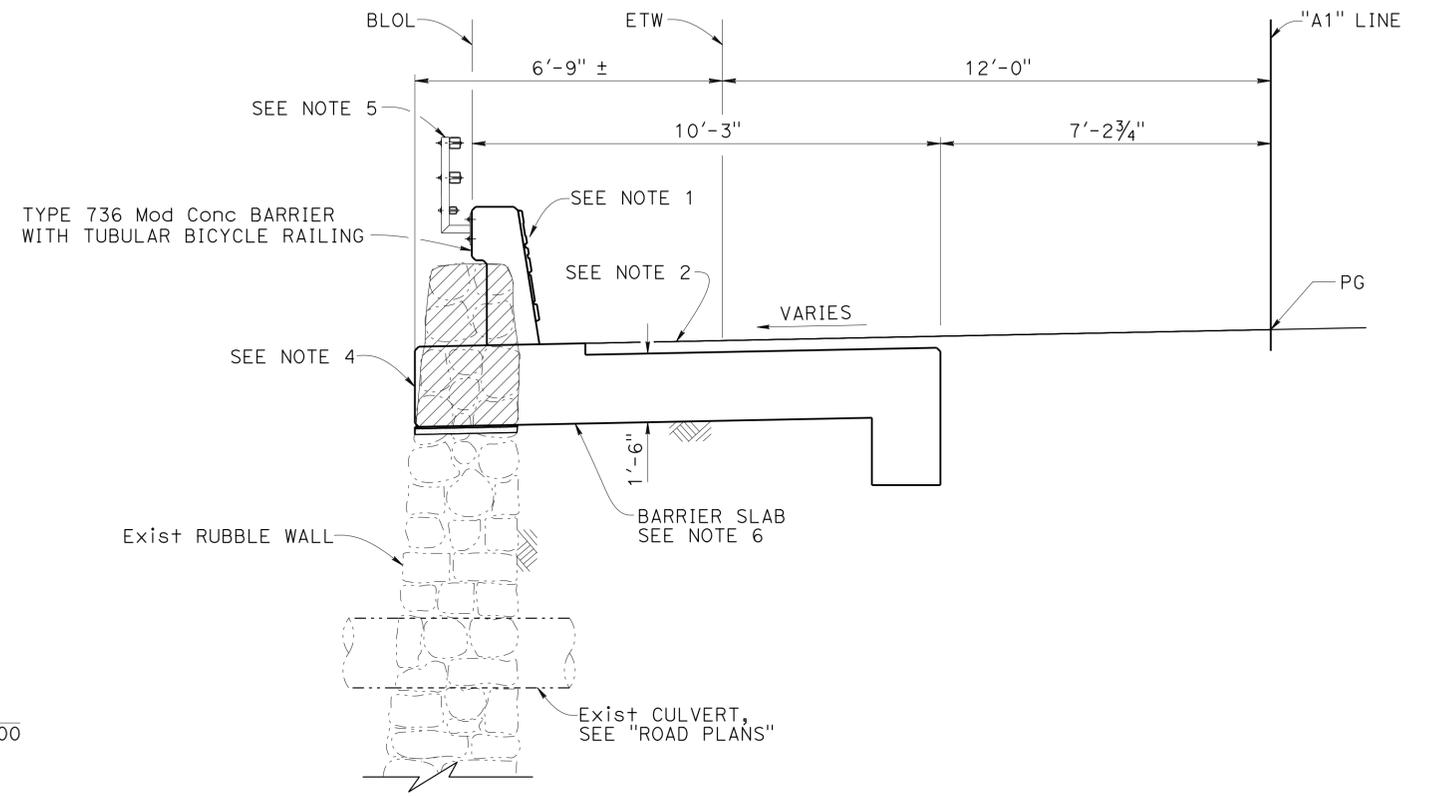
**PROFILE GRADE**  
NO SCALE



**MIRRORED ELEVATION**  
1" = 10'-0"



**PLAN**



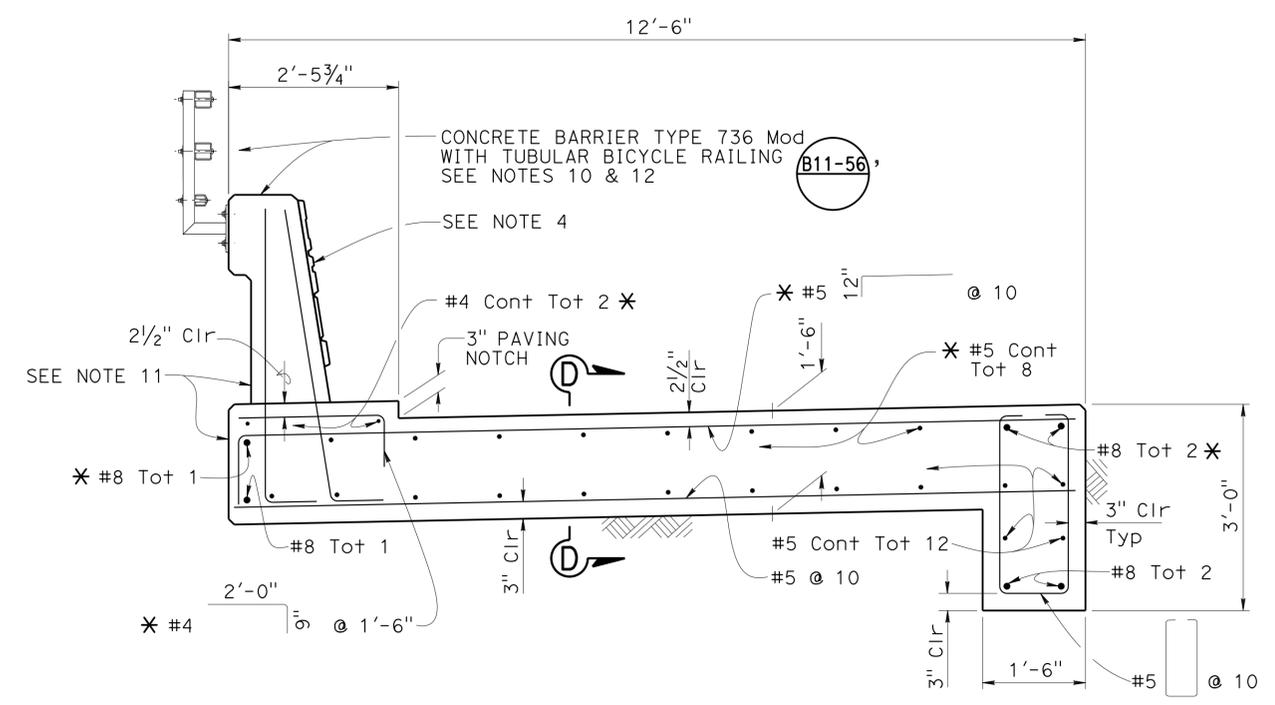
**TYPICAL SECTION**  
1/4" = 1'-0"

- NOTES:**
1. Inside face of concrete barrier to receive concrete surface texture.
  2. New overlay, see "Road Plans".
  3. Smooth curve from beginning to end of Barrier Slab with radius = 281'-3" ± and approximately matching edge of rubble wall.
  4. Prepare and stain exterior face of Barrier Slab.
  5. Paint tubular bike rail.
  6. For Barrier Slab Details, see DETAIL B "DETAILS" sheet.
  7. Concrete Barrier Type 736B Mod, see "Road Plans".
  8. Metal Beam Guard Rail, see "Road Plans".
- Conflicting portion of wall to be removed  
 Indicates existing  
 BLOL Concrete Barrier Layout Line

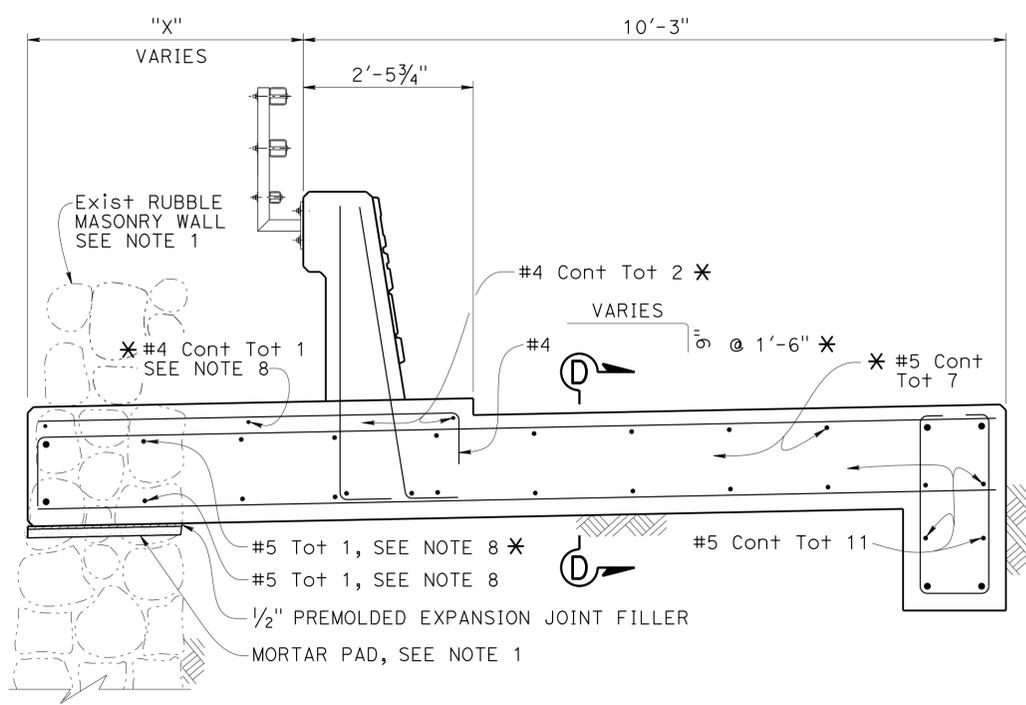
G. SETBERG DESIGN ENGINEER	DESIGN	BY G. SLOCUM	CHECKED N. NGUYEN	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 2	BRIDGE NO.	COLLINS BAR BARRIER SLABS GENERAL PLAN SLAB No. 4	
	DETAILS	BY C. FIGUERRES	CHECKED N. NGUYEN	LAYOUT	BY G. SLOCUM			CHECKED N. NGUYEN		SLAB
	QUANTITIES	BY G. SLOCUM	CHECKED C. FIGUERRES	SPECIFICATIONS	BY D. KLEIN			PLANS AND SPECS COMPARED D. KLEIN		POST MILE

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS: 0 1 2 3  
 UNIT: 3577 PROJECT NUMBER & PHASE: 0200020151 CONTRACT NO.: 02-3E7904  
 DISREGARD PRINTS BEARING EARLIER REVISION DATES  
 REVISION DATES: 3-26-13, 4-09-13, 1-3-14  
 SHEET 4 OF 13  
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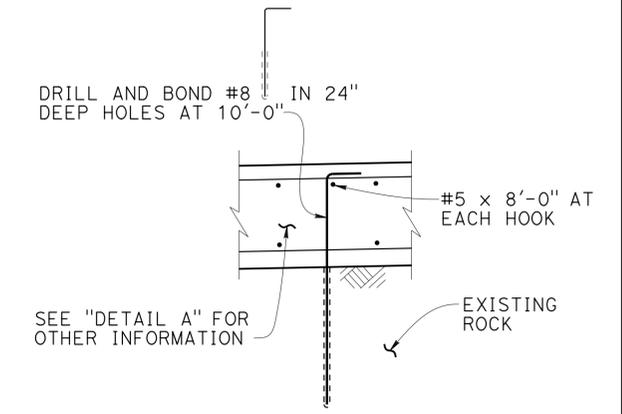
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	299	12.3/12.9	141	149
REGISTERED CIVIL ENGINEER			DATE	1-6-14	
PLANS APPROVAL DATE			3-26-14		
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



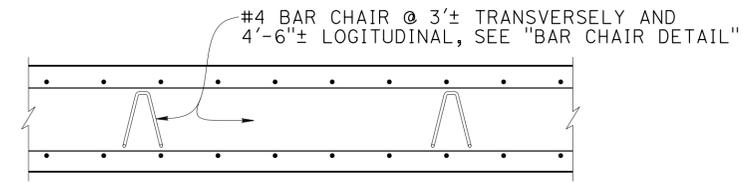
**DETAIL A**  
3/4" = 1'-0"



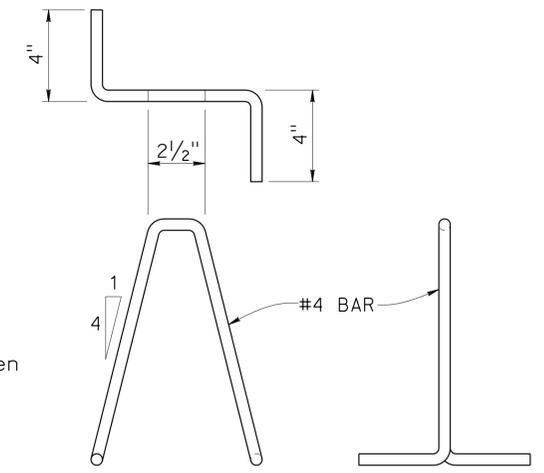
**DETAIL B**  
3/4" = 1'-0"  
SEE NOTE 3



**KEY ALTERNATIVE**  
**DETAIL C**  
3/4" = 1'-0"  
SEE NOTE 9



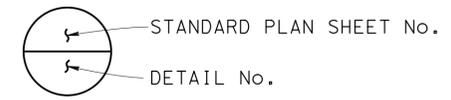
**SECTION D-D**  
3/4" = 1'-0"



**BAR CHAIR DETAIL**  
3" = 1'-0"

**STANDARD PLANS 2010**

- A10A ABBREVIATIONS (SHEET 1 OF 2)
- RSP A10B ABBREVIATIONS (SHEET 2 OF 2)
- A10C LINE AND SYMBOLS
- A10D LINE AND SYMBOLS
- A62C LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL - BRIDGE
- B7-8 DECK DRAINAGE DETAILS
- RSP B11-56 CONCRETE BARRIER TYPE 736



**GENERAL NOTES**  
**(LOAD AND RESISTANCE FACTOR DESIGN)**

- DESIGN: AASHTO LRFD Bridge Design Specifications, Fourth Edition and the California Amendments preface dated September 2010.  
f<sub>t</sub> = 54 Kips/10 Ft on barrier
- DEAD LOAD: Includes 35 psf for wearing surface.
- LIVE LOADING: HL-93
- REINFORCED CONCRETE: f<sub>y</sub> = 60 ksi  
f'<sub>c</sub> = 3.6 ksi  
n = 8

- Notes:**
1. Existing rubble barrier rail and wall to be removed to an elevation 2" below bottom of new barrier slab. The top of remaining wall to be leveled with a smooth mortar pad not to exceed 4" in thickness. Removal of large rocks and replacement with smaller ones may be required to achieve this. 1/2" premolded expansion joint filler to be placed between mortar pad and bottom of new concrete barrier slab.
  2. Barrier rail slab to be poured in conformance with superelevation and profile of new roadway, see "DECK CONTOURS" sheets.
  3. For details not shown, see "DETAIL A".
  4. Traffic side of concrete barrier to receive simulated rock texture. For details, see "ARCHITECTURAL TREATMENT" sheet.
  5. All top mat reinforcement to be epoxy coated steel reinforcing bars.
  6. Minimum rebar clearances do not include relief due to architectural treatment.
  7. For other details and information for Concrete Barrier Type 736 Mod, see B11-56.
  8. Discontinue where "X" is less than 2'-0".
  9. Construct key, see "DETAIL C, KEY ALTERNATIVE" as directed by the Engineer.
  10. See "TUBULAR BICYCLE RAILING DETAILS" sheet.
  11. Prepare and stain exterior face of Barrier Slabs.
  12. Paint tubular bicycle railing.
- \* Indicates epoxy coated

DESIGN	BY G. SLOCUM	CHECKED N. NGUYEN
DETAILS	BY C. FIGUERRES	CHECKED N. NGUYEN
QUANTITIES	BY G. SLOCUM	CHECKED C. FIGUERRES

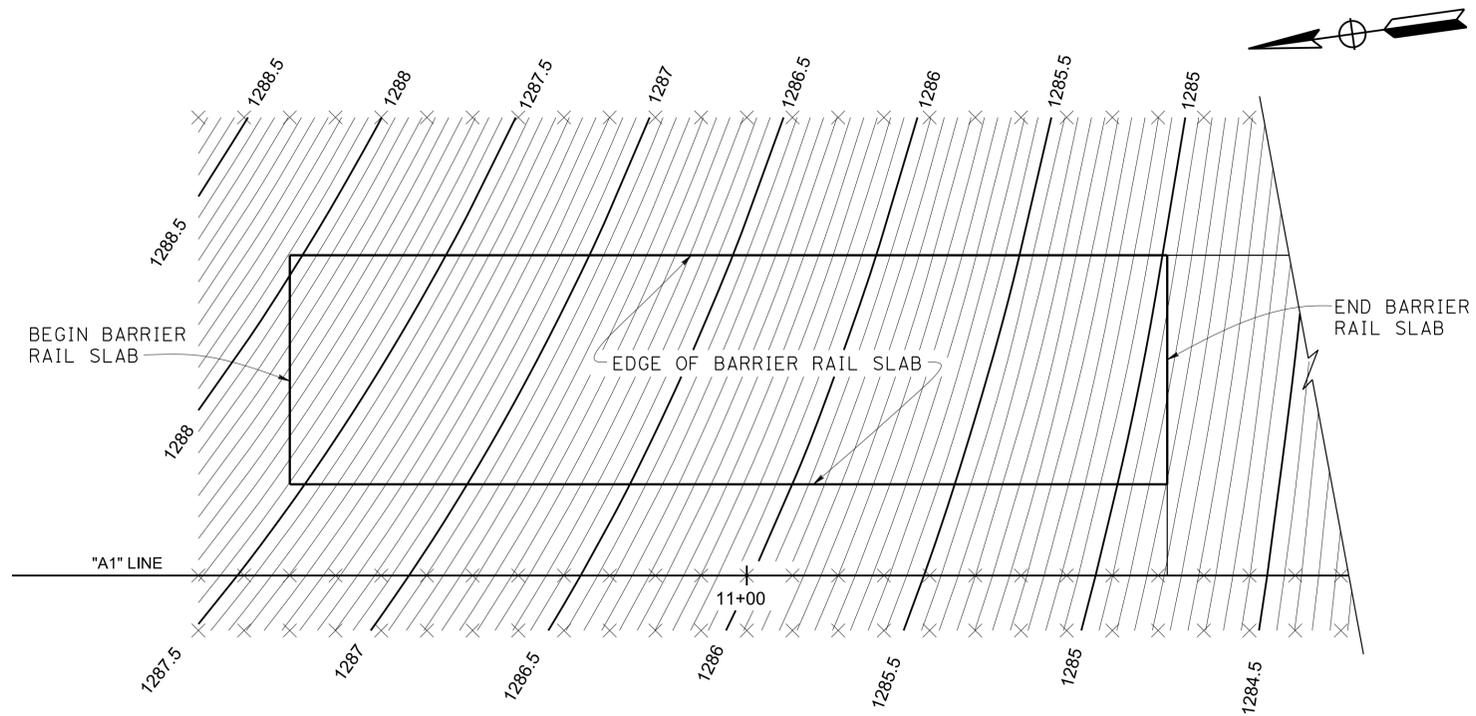
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 2

BRIDGE NO.	
SLAB	
POST MILE	
VAR	

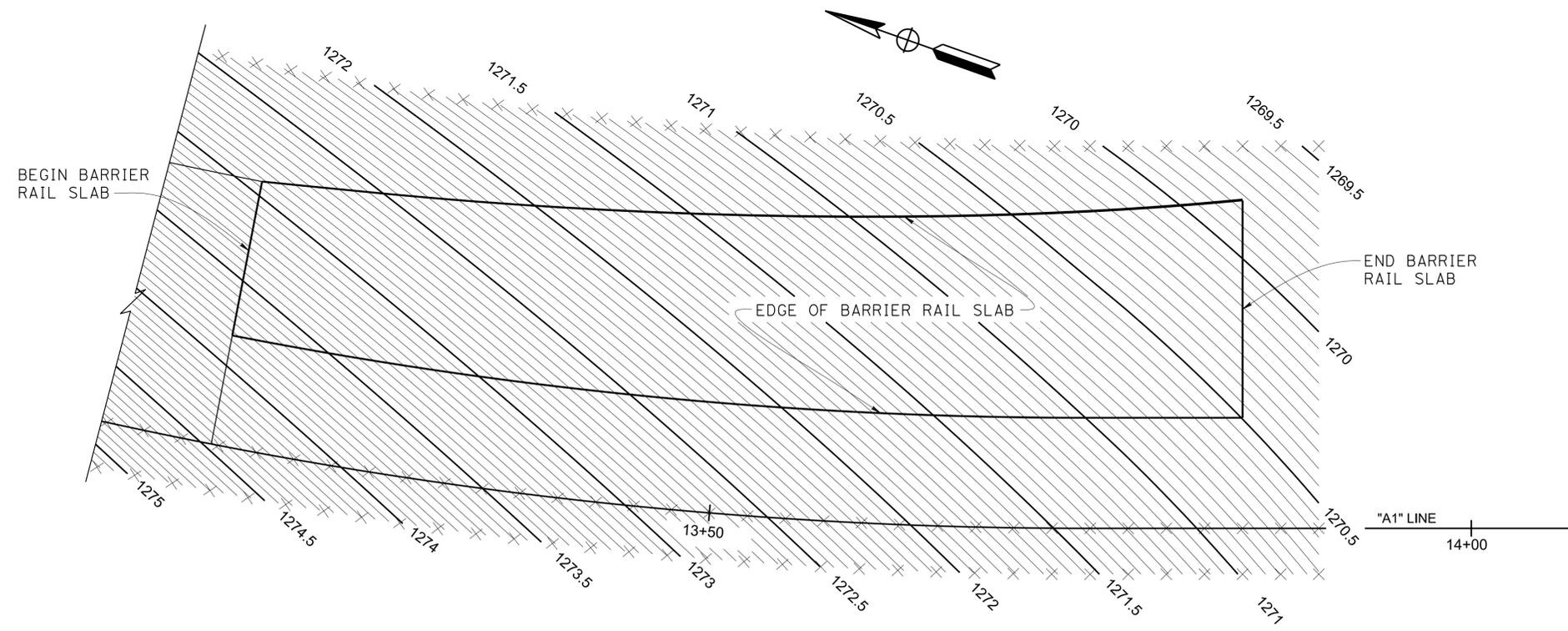
**COLLINS BAR BARRIER SLABS**  
**DETAILS & GENERAL NOTES**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	299	12.3/12.9	142	149
			REGISTERED CIVIL ENGINEER	DATE	
			1-6-14		
			3-26-14		
			PLANS APPROVAL DATE		
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



**BARRIER RAIL SLAB No. 1 DECK CONTOURS**  
1" = 5'-0"

- NOTES:**
1. Contours shown are top of finished roadway surface elevations.
  2. Contours interval = 0.05 Ft
- × 2.5 Ft Interval measured along station line



**BARRIER RAIL SLAB No. 2 DECK CONTOURS**  
1" = 5'-0"

DESIGN	BY G. SLOCUM	CHECKED N. NGUYEN
DETAILS	BY C. FIGUERRES	CHECKED N. NGUYEN
QUANTITIES	BY G. SLOCUM	CHECKED C. FIGUERRES

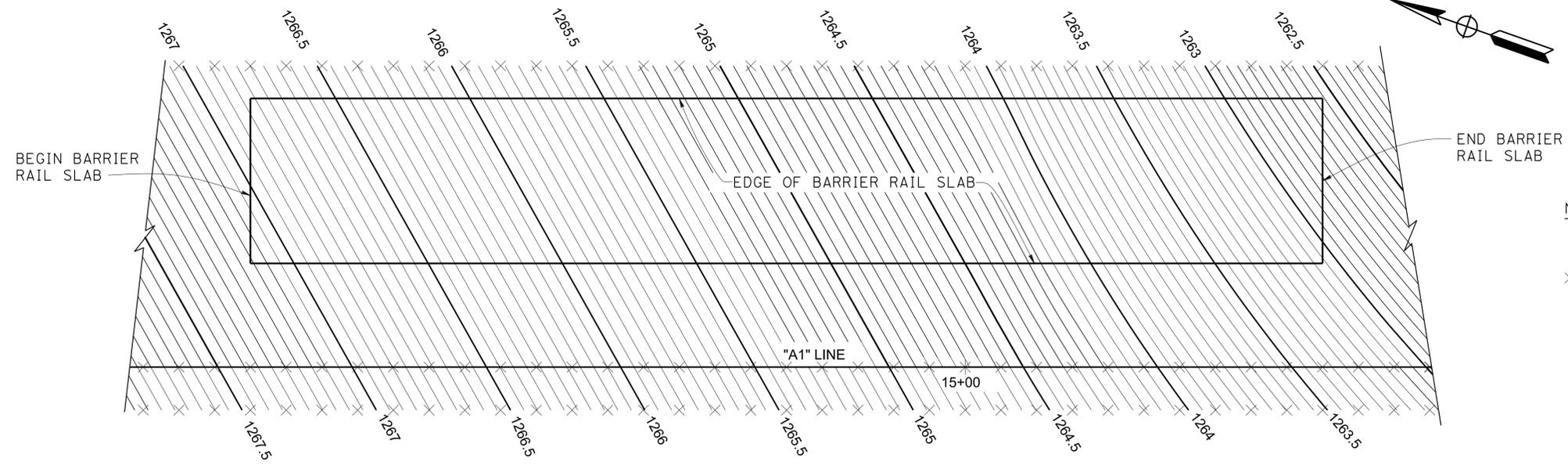
**STATE OF CALIFORNIA**  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
**DESIGN BRANCH 2**

BRIDGE NO.	
SLAB	
POST MILE	
VAR	

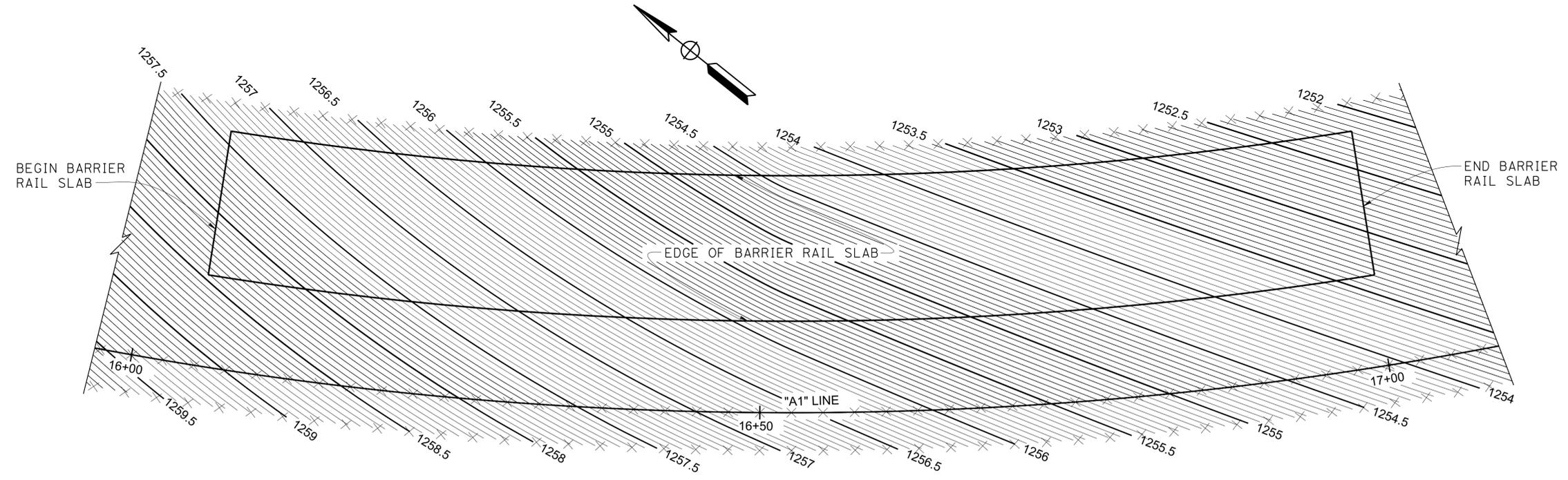
**COLLINS BAR BARRIER SLABS**  
**DECK CONTOURS No. 1**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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			REGISTERED CIVIL ENGINEER	DATE	
			1-6-14		
			3-26-14		
			PLANS APPROVAL DATE		
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



- NOTES:
1. Contours shown are top of finished roadway surface elevations.
  2. Contours interval = 0.05 Ft
- × 2.5 Ft Interval measured along station line

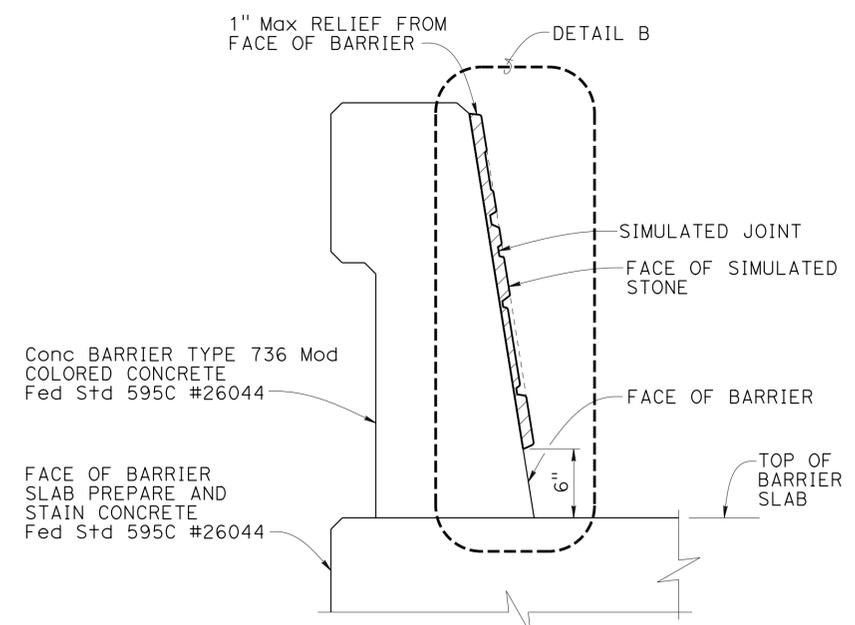
**BARRIER RAIL SLAB No. 3 DECK CONTOURS**  
1" = 5'-0"



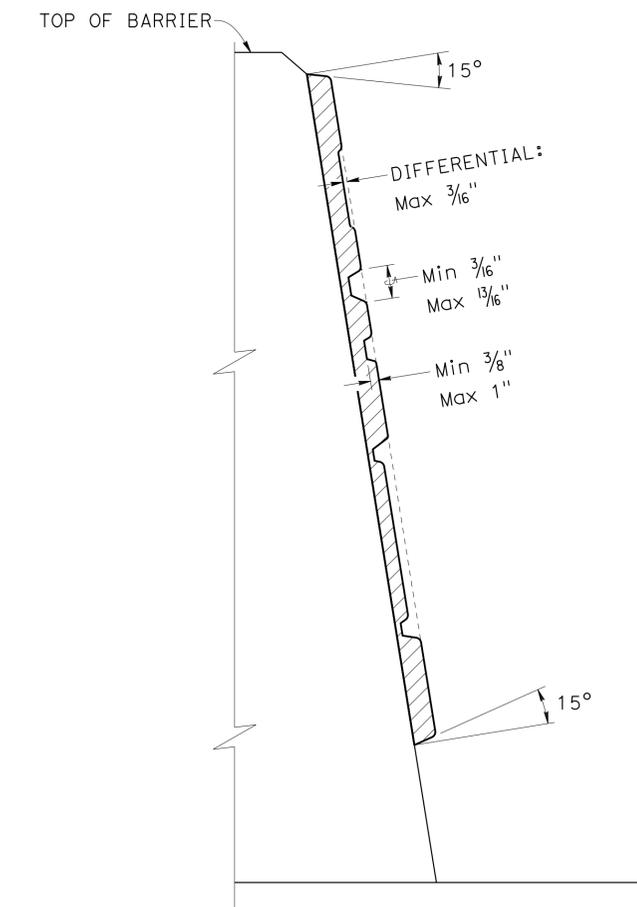
**BARRIER RAIL SLAB No. 4 DECK CONTOURS**  
1" = 5'-0"

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY G. SLOCUM	CHECKED N. NGUYEN	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 2</b>	BRIDGE NO.	<b>COLLINS BAR BARRIER SLABS</b> <b>DECK CONTOURS No. 2</b>			
	DETAILS	BY C. FIGUERRES	CHECKED N. NGUYEN			SLAB				
	QUANTITIES	BY G. SLOCUM	CHECKED C. FIGUERRES			POST MILE VAR				
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				UNIT: 3577 PROJECT NUMBER & PHASE: 0200020151	CONTRACT NO.: 02-3E7904	DISREGARD PRINTS BEARING EARLIER REVISION DATES				
				0	1	2	3	REVISION DATES 1-30-13 2-28-13 3-14-13 3-26-13	SHEET 7	OF 13

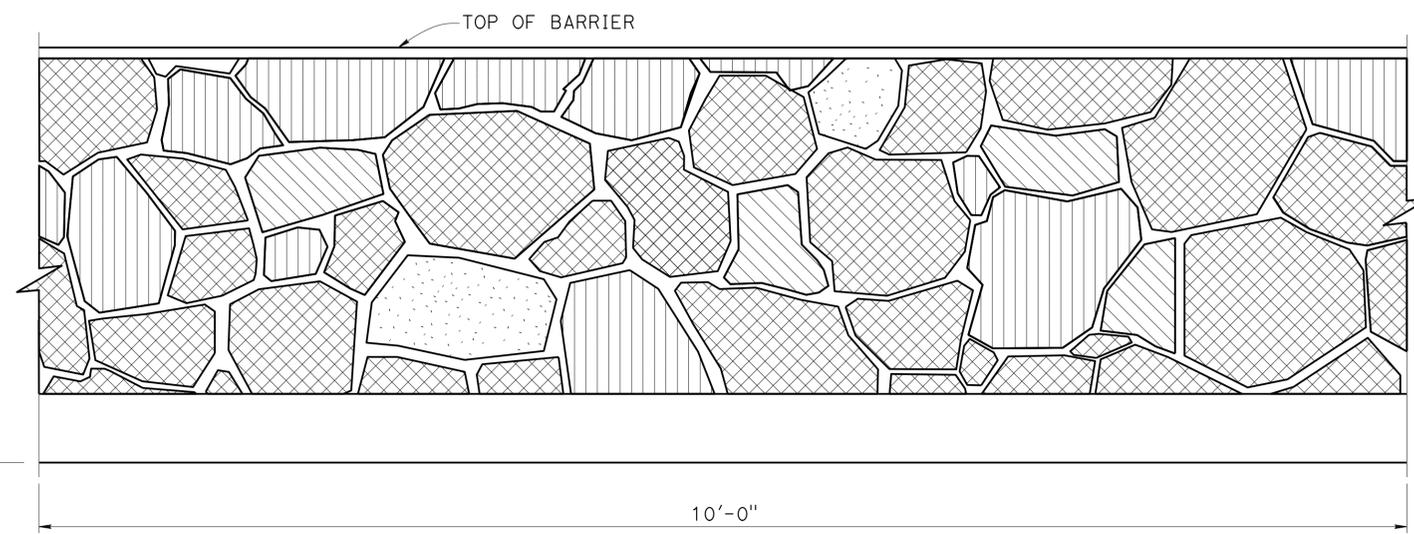
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	299	12.3/12.9	144	149
			1-6-14	DATE	
REGISTERED CIVIL ENGINEER			DATE		
3-26-14			PLANS APPROVAL DATE		
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					



**SECTION A-A**  
1" = 1'-0"



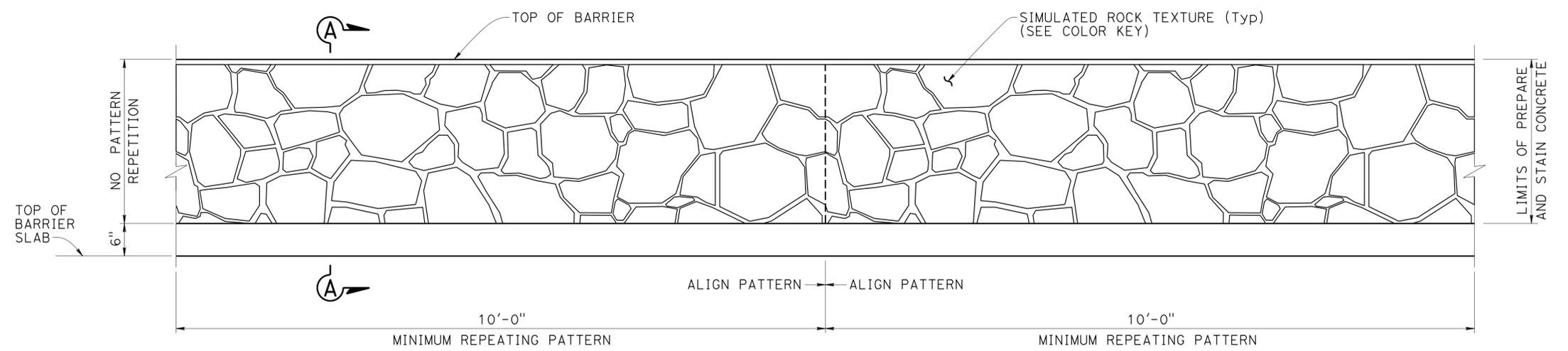
**DETAIL B**  
3" = 1'-0"



**COLOR KEY**  
1/2" = 1'-0"

**BASE COLOR LEGEND:**

	COLORED CONCRETE FEDERAL STANDARD 595C-26044 (VERY DARK GREY)
	75% CONCRETE STAIN FEDERAL STANDARD 595C-26008 (DARK GRAY)
	20% CONCRETE STAIN FEDERAL STANDARD 595C-26122 (GREY BROWN)
	2% CONCRETE STAIN FEDERAL STANDARD 595C-26493 (LIGHT GRAY)
	3% CONCRETE STAIN FEDERAL STANDARD 595C-32169 (RUST)



**SIMULATED ROCK TEXTURE**  
**ELEVATION**  
1" = 1'-0"

DESIGN	BY G. SLOCUM	CHECKED N. NGUYEN
DETAILS	BY C. FIGUERRES	CHECKED N. NGUYEN
QUANTITIES	BY G. SLOCUM	CHECKED C. FIGUERRES

**STATE OF CALIFORNIA**  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
**DESIGN BRANCH 2**

BRIDGE NO.	
SLAB	
POST MILE	
VAR	

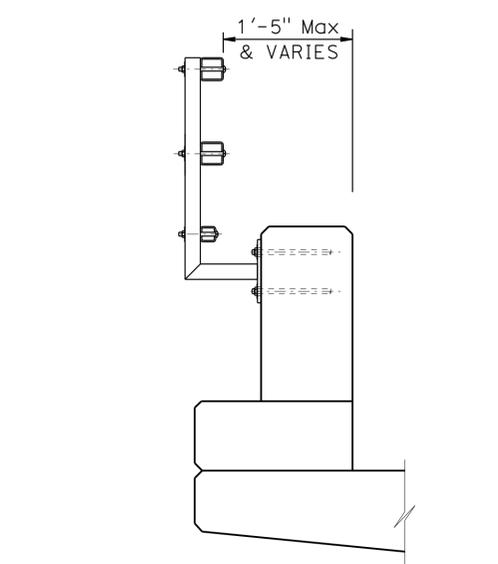
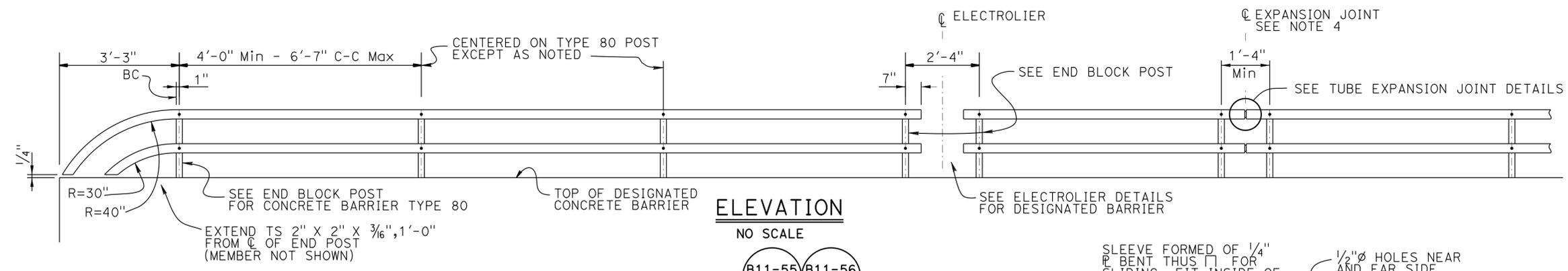
**COLLINS BAR BARRIER SLABS**  
**ARCHITECTURAL TREATMENT**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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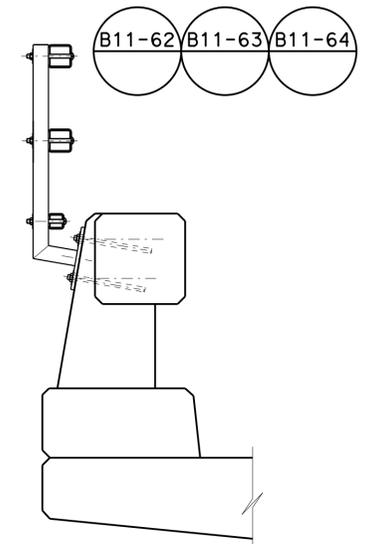
  

REGISTERED CIVIL ENGINEER	DATE
<i>[Signature]</i>	1-6-14
PLANS APPROVAL DATE	
	3-26-14

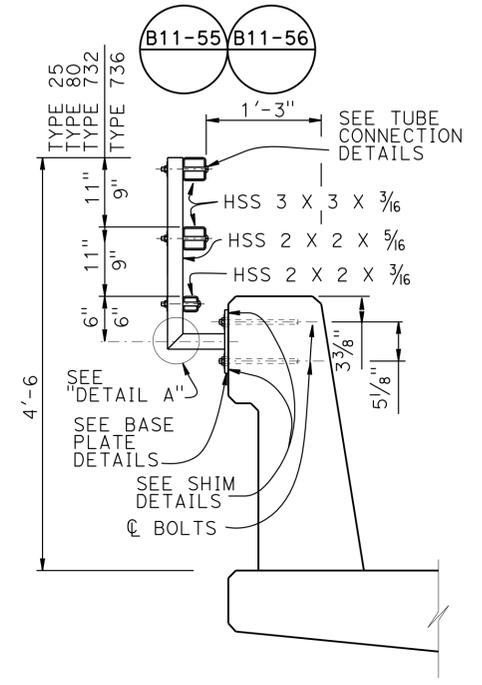
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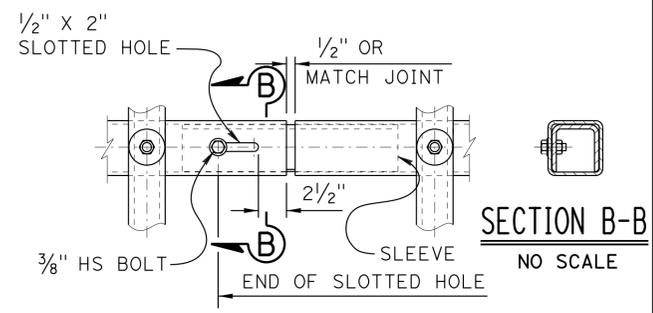
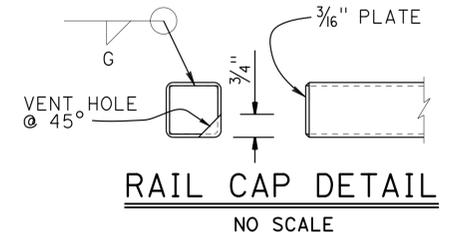
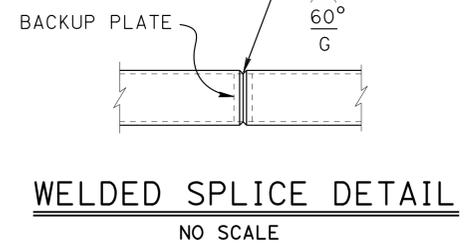
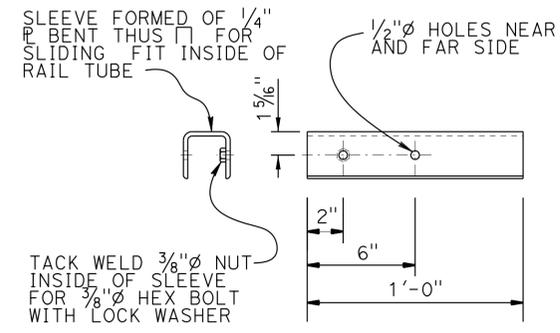
NOTE: For details not shown, see "TYPE 732 OR 736"



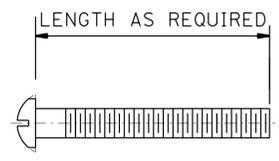
NOTE: For details not shown, see "TYPE 732 OR 736"



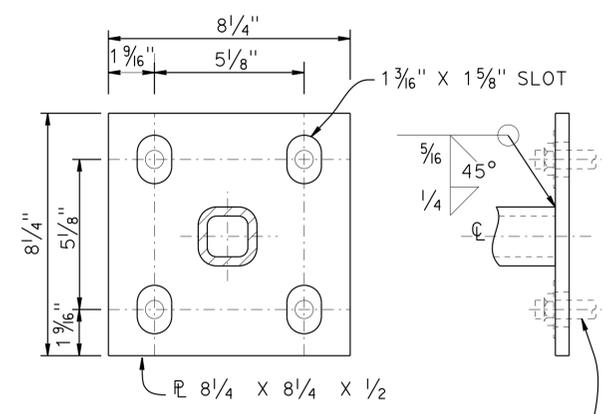
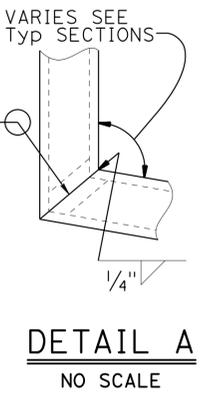
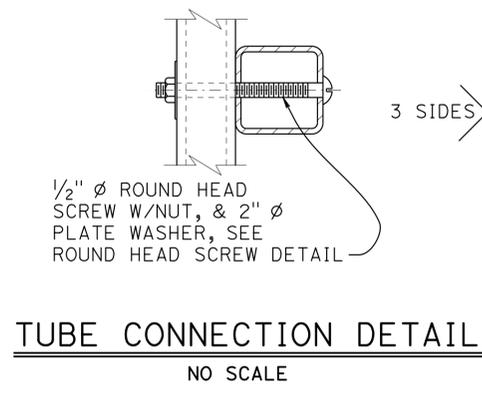
**TYPE 732 OR 736**  
1" = 1'-0"



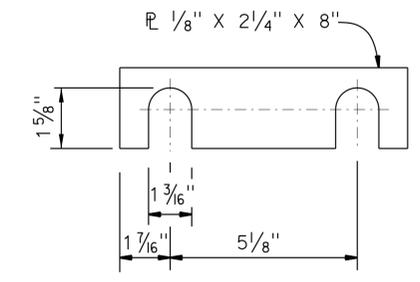
**TUBE EXPANSION JOINT DETAILS**  
NO SCALE



**ROUND HEAD SCREW DETAIL**  
NO SCALE



**BASE PLATE DETAIL**  
NO SCALE



**SHIM DETAILS**  
NO SCALE

- NOTES:
1. Post shall be normal to railing.
  2. Rail tubes shall be shop bent or fabricated to fit horizontal curve when radius is less than 12'.
  3. Tube splices shall be located in the tubes spanning deck or wall joints. Increase joint width in tubes to match expansion joint width and increase sleeve length correspondingly.
  4. Top rail tube shall be continuous over not less than two posts except a short post spacing is permitted near deck or wall joints, electroliers, or other rail discontinuities as noted.
  5. See Project Plans for limits of tubular hand railing.

STANDARD DRAWING	
FILE NO. <b>xs16-035</b>	APPROVAL DATE <u>March 2012</u>

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	
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DIVISION OF ENGINEERING SERVICES	
BRIDGE NO. 05-0091	POST MILE 12.53

COLLINS BAR BARRIER SLABS	
CONCRETE BARRIER TYPE 80, 732 & 736	
TUBULAR BICYCLE RAILING DETAILS	

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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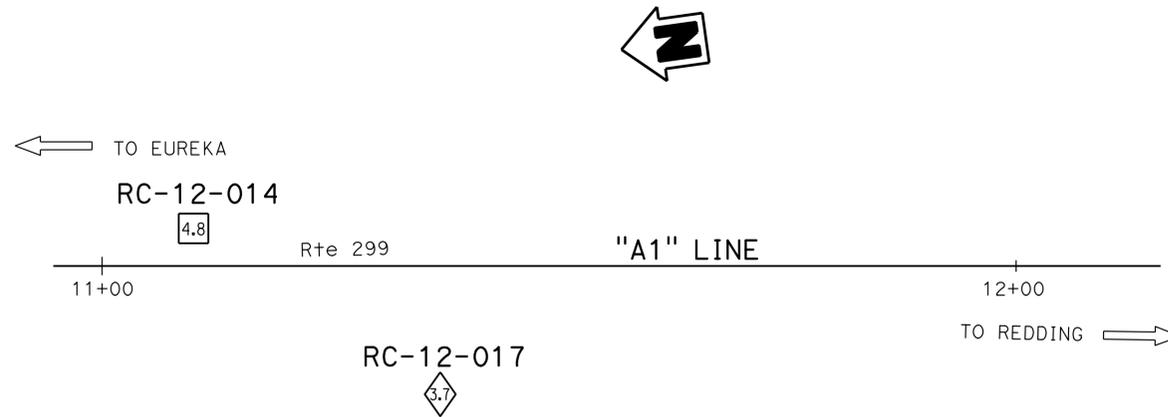
Reid Buell  
 CERTIFIED ENGINEERING GEOLOGIST  
 DATE 6-6-13  
 3-26-14  
 PLANS APPROVAL DATE

Reid Buell  
 No. 1481  
 Exp. 4-30-15  
 CERTIFIED ENGINEERING GEOLOGIST  
 STATE OF CALIFORNIA

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**BENCH MARK**

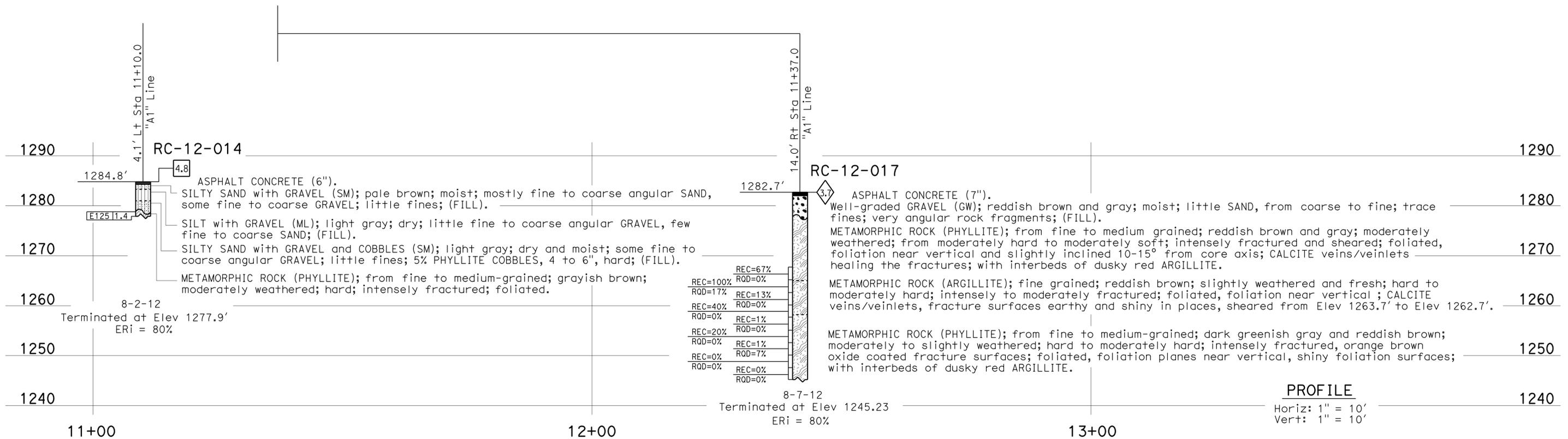
CM 1250  
 Fdn capped rebar  
 59.13 Ft Lt "A1" Line, Route 299  
 Sta 9+12.64  
 N 2,178,107.66  
 E 6,156,646.28  
 Elev = 1298.22  
 NAVD 88



**PLAN**  
1" = 10'

**Notes:**

1. Groundwater was not measured in Boring RC-12-017.
2. Groundwater was not encountered in Boring RC-12-014.



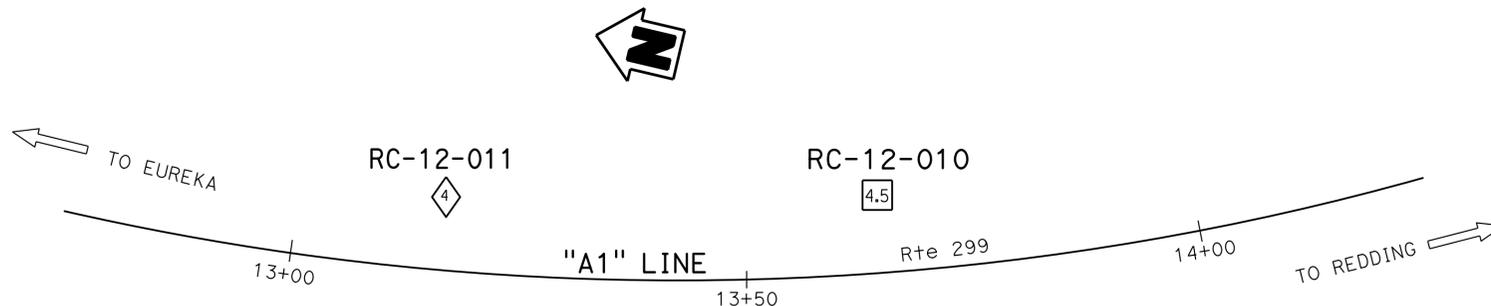
<b>ENGINEERING SERVICES</b>		<b>MATERIALS AND GEOTECHNICAL SERVICES</b>		<b>STATE OF CALIFORNIA</b>		<b>DIVISION OF ENGINEERING SERVICES</b>		<b>BRIDGE NO.</b>		<b>COLLINS BAR BARRIER SLAB NO.1</b>	
FUNCTIONAL SUPERVISOR		DRAWN BY: F. Nguyen		DEPARTMENT OF TRANSPORTATION		STRUCTURE DESIGN		POST MILE		<b>LOG OF TEST BORINGS</b>	
NAME: Roy Bibbens		CHECKED BY: L. Paredes-Mejia		FIELD INVESTIGATION BY: J. Thorne, A. Barrie,		DESIGN BRANCH		12.3-12.7			
06S CIVIL LOG OF TEST BORINGS SHEET		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		UNIT: 3643		PROJECT NUMBER & PHASE: 02000201511		CONTRACT NO.: 02-3E7901		DISREGARD PRINTS BEARING EARLIER REVISION DATES	
				0 1 2 3		REVISION DATES		SHEET		OF	
						03-29-13 04-09-13 04-16-13 06-06-13		10		13	

FILE => barrier\_slab-y-ltb01.dgn

USERNAME => s123119 DATE PLOTTED => 28-MAY-2014 TIME PLOTTED => 15:09

**BENCH MARK**

CM 1250  
 Fdn capped rebar  
 59.13 Ft Lt "A1" Line, Route 299  
 Sta 9+12.64  
 N 2,178,107.66  
 E 6,156,646.28  
 Elev = 1298.22  
 NAVD 88



**PLAN**  
 1" = 10'

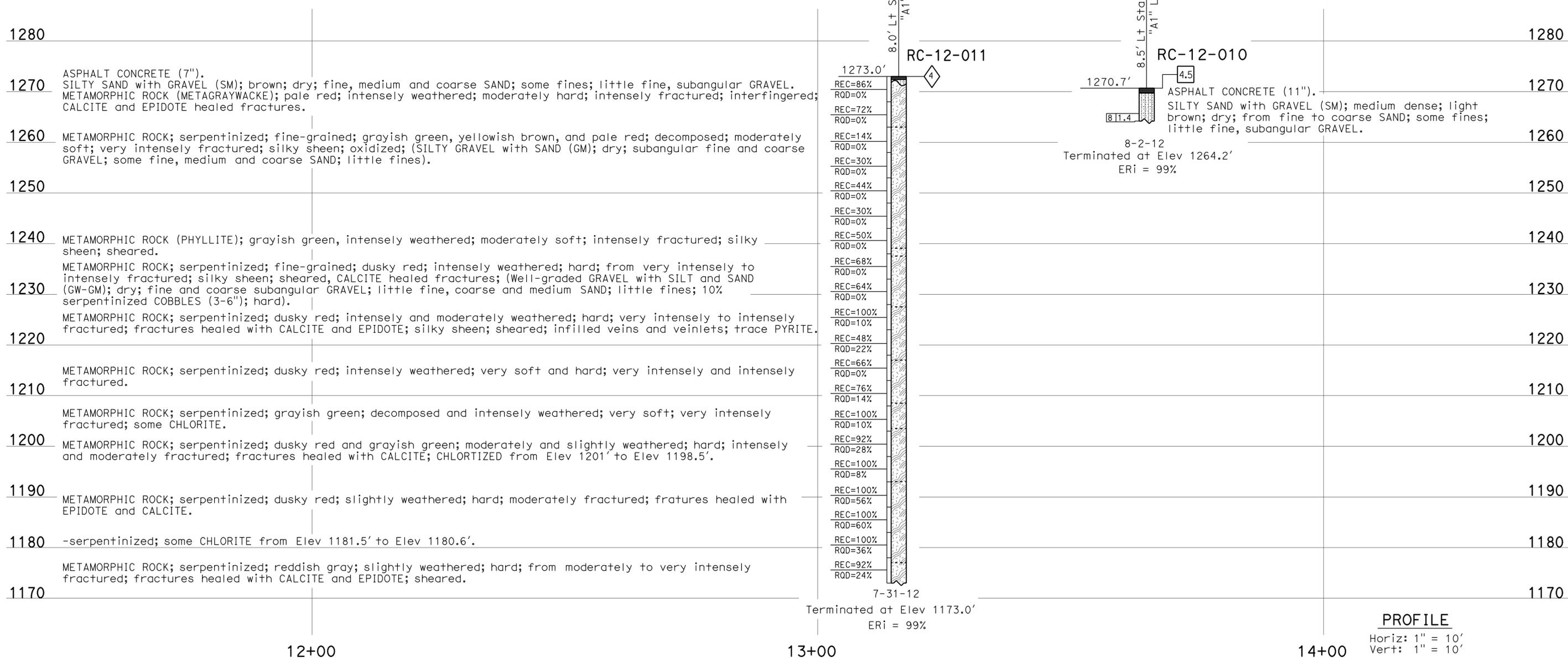
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	299	12.3/12.9	147	149

CERTIFIED ENGINEERING GEOLOGIST: Reid Buell  
 DATE: 6-6-13  
 PLANS APPROVAL DATE: 3-26-14  
 No. 1481  
 Exp. 4-30-15  
 CERTIFIED ENGINEERING GEOLOGIST  
 STATE OF CALIFORNIA

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This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).  
 See 2010 Standard Plans A10F and A10G for Soil Legend, and A10H for Rock Legend.

- Notes:**
1. Groundwater was not measured in Boring RC-12-011.
  2. Groundwater was not encountered in Boring RC-12-010.



**PROFILE**  
 Horiz: 1" = 10'  
 Vert: 1" = 10'

<b>ENGINEERING SERVICES</b>		<b>MATERIALS AND GEOTECHNICAL SERVICES</b>		<b>STATE OF CALIFORNIA</b>		<b>DIVISION OF ENGINEERING SERVICES</b>		<b>BRIDGE NO.</b>		<b>COLLINS BAR BARRIER SLAB NO.2</b>	
FUNCTIONAL SUPERVISOR		DRAWN BY: F. Nguyen		DEPARTMENT OF TRANSPORTATION		STRUCTURE DESIGN		POST MILE		<b>LOG OF TEST BORINGS</b>	
NAME: R. Bibbens		CHECKED BY: L. Paredes-Mejia		FIELD INVESTIGATION BY: T. Alderman		DESIGN BRANCH		12.3-12.7			
06S CIVIL LOG OF TEST BORINGS SHEET		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		UNIT: 3643		PROJECT NUMBER & PHASE: 02000201511		CONTRACT NO.: 02-3E7901		DISREGARD PRINTS BEARING EARLIER REVISION DATES	
				0 1 2 3						REVISION DATES	
										SHEET 11 OF 13	

USERNAME => s123119 DATE PLOTTED => 28-MAY-2014 TIME PLOTTED => 15:09

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	299	12.3/12.9	148	149

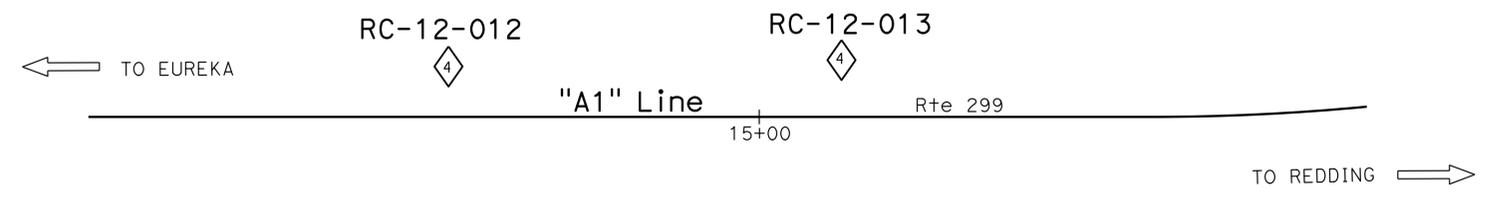
Reid Buell 6-6-13  
 CERTIFIED ENGINEERING GEOLOGIST DATE  
 3-26-14  
 PLANS APPROVAL DATE

Reid Buell  
 No. 1481  
 Exp. 4-30-15  
 CERTIFIED ENGINEERING GEOLOGIST  
 STATE OF CALIFORNIA

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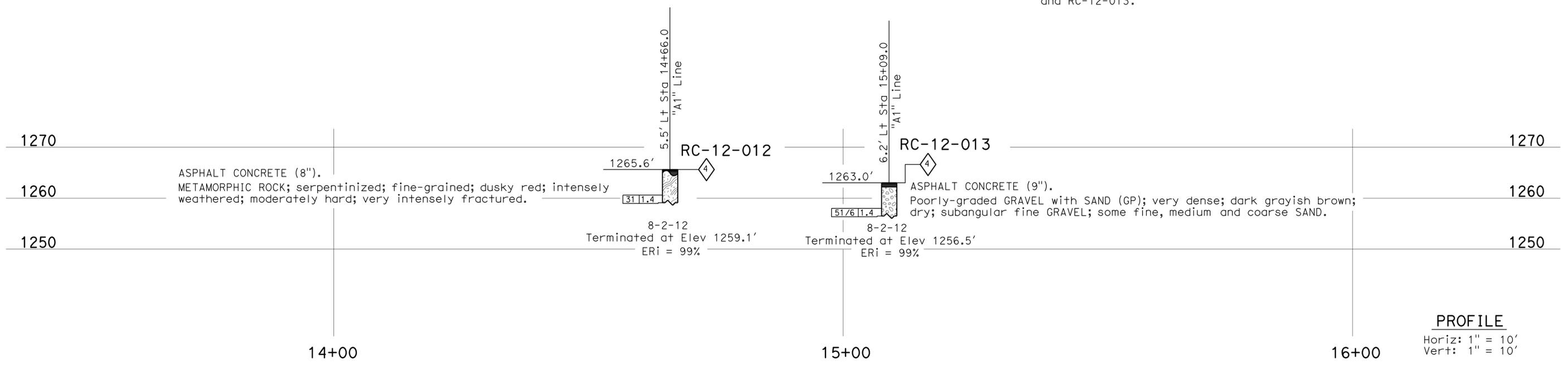
This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition). See 2010 Standard Plans A10F and A10G for Soil Legend, and A10H for Rock Legend.

**BENCH MARK**  
 CM 1250  
 Fdn capped rebar  
 59.13 Ft Lt "A1" Line, Route 299  
 Sta 9+12.64  
 N 2,178,107.66  
 E 6,156,646.28  
 Elev 1298.22  
 NAVD 88



**PLAN**  
 1" = 10'

Note: Groundwater was not encountered in Borings RC-12-012 and RC-12-013.



<b>ENGINEERING SERVICES</b>		<b>MATERIALS AND GEOTECHNICAL SERVICES</b>		<b>STATE OF CALIFORNIA</b>		<b>DIVISION OF ENGINEERING SERVICES</b>		<b>BRIDGE NO.</b>		<b>COLLINS BAR BARRIER SLAB NO.3</b>	
FUNCTIONAL SUPERVISOR		DRAWN BY: F. Nguyen		FIELD INVESTIGATION BY:		STRUCTURE DESIGN		POST MILE		<b>LOG OF TEST BORINGS</b>	
NAME: R. Bibbens		CHECKED BY: L. Paredes-Mejia		T. Alderman		DESIGN BRANCH		12.3-12.7			
O&S CIVIL LOG OF TEST BORINGS SHEET				ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				UNIT: 3643		SHEET OF	
				0 1 2 3				PROJECT NUMBER & PHASE: 02000201511		CONTRACT NO.: 02-3E7901	
								DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES	
										03-26-13 04-09-13 04-16-13 06-06-13	
										12 13	

FILE => barrier\_slab-y-ltb03.dgn

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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tri	299	12.3/12.9	149	149

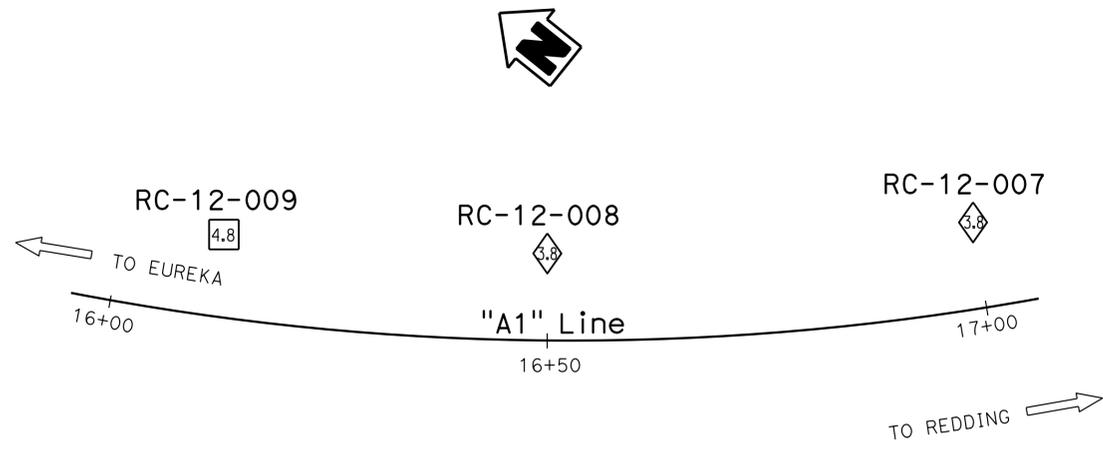
Reid Buell 6-6-13  
 CERTIFIED ENGINEERING GEOLOGIST DATE  
 3-26-14  
 PLANS APPROVAL DATE

Reid Buell  
 No. 1481  
 Exp. 4-30-15  
 CERTIFIED ENGINEERING GEOLOGIST  
 STATE OF CALIFORNIA

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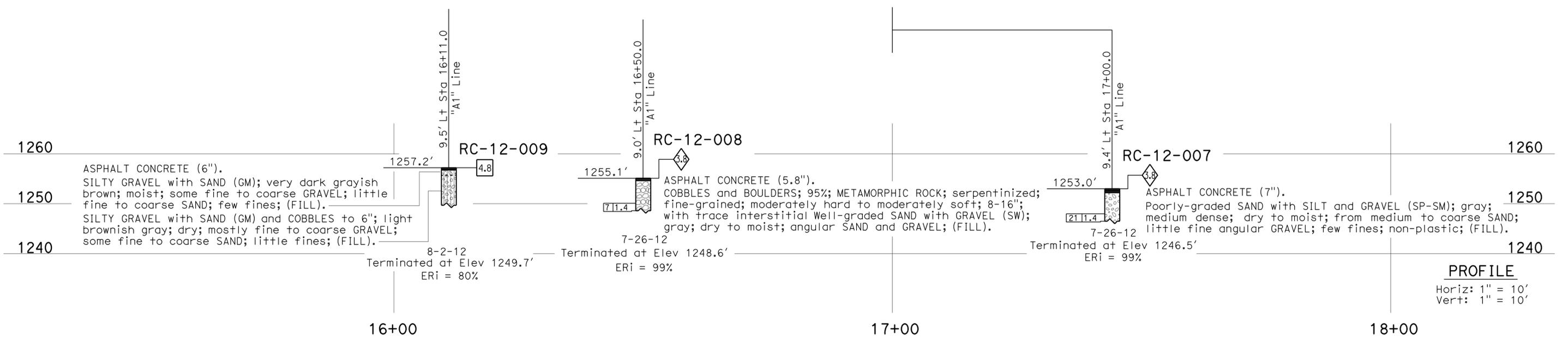
**BENCH MARK**

CM 1250  
 Fdn capped rebar  
 59.13 Ft Lt "A1" Line, Route 299  
 Sta 9+12.64  
 N 2,178,107.66  
 E 6,156,646.28  
 Elev 1298.22  
 NAVD 88



**PLAN**  
1" = 20'

Note: Groundwater was not encountered in Borings RC-12-007, RC-12-008 and RC-12-009.



**PROFILE**  
Horiz: 1" = 10'  
Vert: 1" = 10'

<b>ENGINEERING SERVICES</b>		<b>MATERIALS AND GEOTECHNICAL SERVICES</b>		<b>STATE OF CALIFORNIA</b>		<b>DIVISION OF ENGINEERING SERVICES</b>		<b>BRIDGE NO.</b>		<b>COLLINS BAR BARRIER SLAB NO.4</b>	
FUNCTIONAL SUPERVISOR		DRAWN BY: F. Nguyen		DEPARTMENT OF TRANSPORTATION		DESIGN BRANCH		POST MILE		<b>LOG OF TEST BORINGS</b>	
NAME: R. Bibbens		CHECKED BY: L. Paredes-Mejia		FIELD INVESTIGATION BY: J. Thorne, B. Webster.		PROJECT NUMBER & PHASE: 02000201511		12.3-12.7		CONTRACT NO.: 02-3E7901	
OGS CIVIL LOG OF TEST BORINGS SHEET		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		0 1 2 3		UNIT: 3643		DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES	
						PROJECT NUMBER & PHASE: 02000201511				03-26-13 04-09-13 04-16-13 06-06-13	
						CONTRACT NO.: 02-3E7901				SHEET 13 OF 13	

USERNAME => s123119 DATE PLOTTED => 28-MAY-2014 TIME PLOTTED => 15:10